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CONTENTS

No. 306

An Appreciation—By Col. James A. Woodruff.....	1092
The American Lumberjack in France—By Lieut.-Col. W. B. Greeley.....	1093
The Forest Engineers—By Lieut.-Col. Henry S. Graves.....	1109
Organization of 20th Engineers (Forestry).....	1110
20th Engineers (Forestry) Record of Development and Production	1111
French Forests in the War—By Major Barrington Moore.....	1113
How the American Army Got Its Wood—By Percival Sheldon Ridsdale.....	1137
A Lesson From France—By Capt. Ralph H. Faulkner, 20th Engineers.....	1155
War Service of the American Forestry Association.....	1158
"The Great Tree Maker".....	1158
Jobs for Returning Lumbermen and Foresters.....	1159
The Welfare Fund.....	1163
Donations to the Welfare Fund for Lumbermen and Foresters in War Service.....	1168

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VIEW OF BOURICOS 20-M AMERICAN SAWMILL NEAR PONTENX, LANDES, SHOWING LOGS ON SKIDS READY TO BE TAKEN INTO THE SAWMILL

General Order
No. 3

An Appreciation

Hq. 20th Engineers (For.)
U. S. M. P. O. 717
December, 1918

To the Officers and Soldiers of the Twentieth Engineers and Attached Service Troops:

ON November 25, 1917, the first board was cut in France by American Forestry Troops at a little French mill in the Jura Mountains. At the same time, another detachment was getting out 50-foot piling in the Landes on escort wagons drawn by hand. The total cut during December, 1917, was 321,000 board feet of lumber and 12,000 railroad ties.

When the armistice was signed on November 11, 1918, the 20th Engineers were operating 81 American Sawmills and producing 2,000,000 feet of lumber and round products every working day. Up to December 1, we have cut a total of 272,500,000 feet of lumber, including 2,728,000 railroad ties, together with 38,000 pieces of piling, 2,739,000 poles of all sizes and 892,000 steres of fuel-wood.

Recent reports from the various depots and construction projects of the A. E. F. show that the Army was at the time of concluding the armistice well supplied with lumber. When ties were called for in large quantities to support the advances of our troops at St. Mihiel and the Argonne, they were ready. At practically every dock project, deliveries of piling and lumber were well ahead of the construction. In other words, the Forestry Troops have made good on the work for which they were brought to France. Notwithstanding the difficulties in obtaining equipment and transportation, notwithstanding the enormous increase in the size of the A. E. F., and the work which it undertook over the original estimates, the Army has been given the lumber which it needed, and the suspension of hostilities finds us with a substantial surplus which will be used for the restoration of France. This is an achievement in

which every man in the Forestry Troops may well take pride, for every one of you have had a share in it. Your part in winning the war has been as important as that of any other troops in the A. E. F. Your loyalty and enthusiasm have been put to a hard test. You wanted to get to the front, but could not. You have had to put in long hours of the hardest kind of work, month after month, without glory or excitement, and without the special forms of recognition given to combat troops. The Medical Officers have told us that the Forestry Troops were being worked too hard, but the only answer has been a steadily increasing cut of lumber from month to month. You have failed in no task that has been assigned to you. You have gotten more out of sawmills than had ever been dreamed of by mill operators at home. Time and again, in spite of difficulties such as lumbermen never contended with before, you have exceeded our expectations. Your record as members of the A. E. F. will be a source of pride and satisfaction to you as you return to civil life. It will be your recompense for the sacrifices which many of you have made to come to France.

As Commanding officer of the 20th Engineers, I thank you for the untiring and uncomplaining way in

which you have done your work. I am glad to have been identified with such a body of American soldiers.

A copy of this order will be sent to every company and detachment of the 20th Engineers, and attached service troops; read to the troops, and posted on the Company or Detachment bulletin board.

J. A. WOODRUFF,
Colonel, Engineers.



COL. JAMES A. WOODRUFF
Commanding 20th Engineers (Forestry)

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NO. 306

THE AMERICAN LUMBERJACK IN FRANCE

BY LIEUT.-COL. W. B. GREELEY, 20TH ENGINEERS

NOTHING illustrates the far-reaching economic demands of the Great War more sharply than the enormous use of timber in almost every phase of military operations. From the plank roads at the front, the bomb proofs, the wire entanglements, and the ties needed for the rapid repair or construction of railroads upon which military strategy largely depended, to the hospitals, warehouses, camps, and docks at the base ports, timber was in constant demand as a munition of war. One of the earliest requests for help from the United States by both our French and British allies was for regiments of trained lumbermen. General Pershing had been in France less than two months when he cabled the War Department for a force of lumberjack soldiers large enough to cut upwards of 25,000,000 board feet per month for the American Expeditionary Force. A year later, the requirements of the enormous army then planned for and being sent to France with all possible speed were put at over 73,000,000 board feet per month.

Such was the task marked out for the lumberjack regiments of the American Army, for the lack of ocean transport made it necessary to obtain practically all of this material from French forests. The organization of these lumberjack units, all of which were combined later in the 20th Engineers (Forestry), began in May, 1917, and continued until March, 1918. By May, 1918, forty-eight

companies of forest and road engineers, each 250 men strong, had been sent to France. The core of a 49th Company was obtained subsequently from the New England sawmill units which were sent to old England in the early summer of 1917 to cut lumber for the British Government. These troops represented every State in the Union. Practically every forestry agency in the country, together with many lumber companies and associations, took off their coats to help in obtaining the right type of men. The road engineers of the United States took hold of the organization of the twelve companies of troops designed for road construction in a similar spirit. The lumber units were officered largely by picked men of experience in forest industries of America; and the road units by road and construction engineers of exceptional technical ability.

The earlier units were made up entirely from volunteer enlistments. The later units contained a large proportion of men from the draft, selected for forestry work mainly on the basis of their former occupations, together with many volunteers beyond the draft age from among the experienced loggers and saw-mill mechanics of the country. But there was no distinction between volunteer



LIEUT-COL. W. B. GREELEY

or drafted soldiers in the way the American lumberjacks hit their job in France. These men represented the best of their hardy and resourceful profession in the United

States. They came straight from her forests and sawmills, trained in her woodcraft, with all of the physical vigor, the adaptability to life in the open, and the rough and ready mechanical skill of the American woodsman. They knew their work and were ready to put all that they had into it.

Furthermore, these lumberjack soldiers felt in a peculiar way that their country was behind them. This was not only in the focusing of national forces from every

crews made off with the laurels of certain pure lumberjack units, in the records of the operations for production.

To meet the growing requirements of the American Army, Engineer Service battalions were rapidly added to the forestry and road troops during the summer and fall of 1918. At the end of hostilities, thirty-six Service companies were working with the 20th Engineers. The first four of them were white troops, organized as the

"The lumbermen and foresters of the United States may well take pride in the men who have represented them on the American Expeditionary Force. Now they are returning, better men for the sacrifices they have made, for the sense of organization and responsibility which they have learned, for the difficulties which they have mastered, and for the understanding which they have gained of forest culture and forest thrift in France. Such a body of trained men represent an asset of the utmost value to the forest industries of America. Let us recognize their worth and their capacity by an intelligent direction of the return of these soldiers to civil life in positions where their experience in national service can be effectively utilized."—Lt. Col. W. B. Greeley, 20th Engineers (Forestry).

point upon winning the war, but in the special efforts of the forest industries to man and equip the lumber regiments. Many lumber companies had sacrificed their own interests in urging valued employees to join the ranks of the forest regiments. In many cases differences in pay were made good by old employers or provision made for the families left behind. And the lumberjack soldiers felt, too, the backing of friendliness and forethought which followed them to France, in the organized steps taken by the lumber and forestry associations for their comfort and welfare.

Special credit is due to the officers and men of the three battalions, the 41st, 42nd, and 43rd Engineers, which were organized and equipped for road and construction work in connection with forestry operations. They came to France keen to take up this task, for which they too had been especially fitted by training and experience.

But the necessities of war dictated otherwise. They landed in France to find the undermanned Forestry Section struggling to keep up with the timber needs of an army already twice the size of that originally intended. It was necessary for these road builders to turn lumberjacks themselves, cutting fuelwood, piling, or entanglement stakes as occasion demanded and manning the new sawmills which were installed as fast as they arrived from the United States. The road companies took hold of this work, to which most of them were unaccustomed, with splendid spirit, and in the end some of their mill

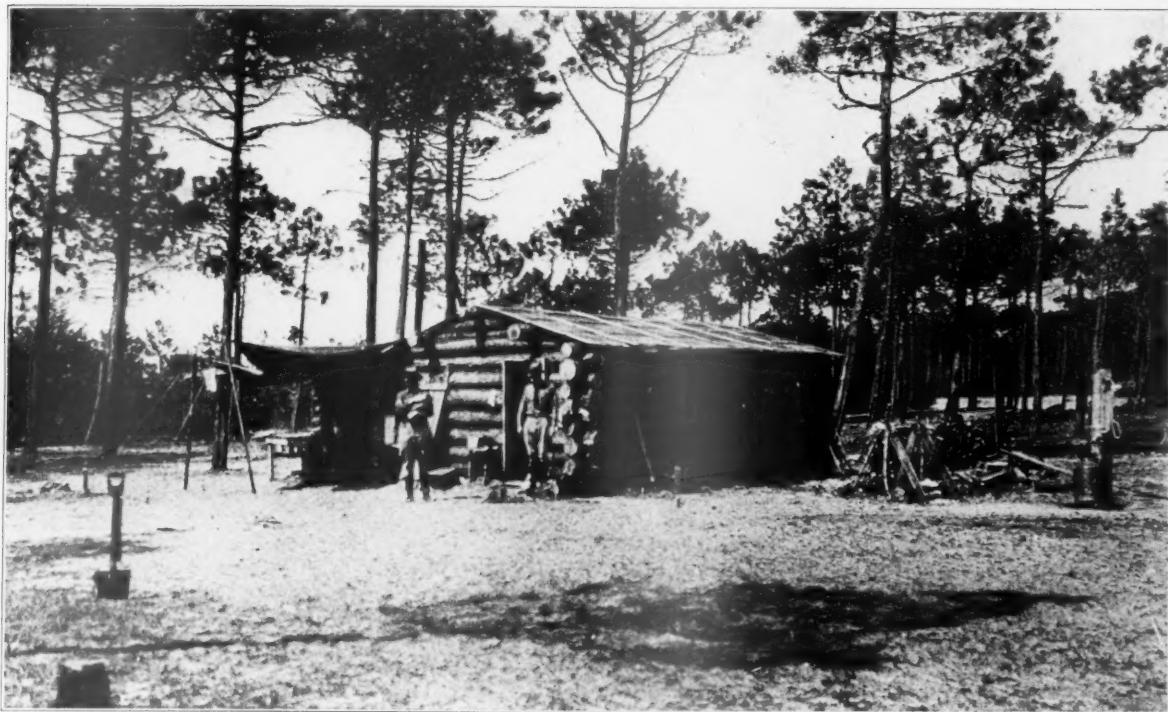
503d Engineers. They contained a large proportion of railroad men and other skilled workers, and were soon in the mills and woods and on railroad jobs, on all fours with the forestry troops. Upon the other Service Companies, composed of colored troops, fell the brunt of cutting the fuelwood which the Quartermaster was calling for by the hundreds of thousands of cords. But several sawmill crews composed largely or entirely of black soldiers made exceedingly creditable records.

The first board was cut by the American troops in France, at a little French mill in the Jura Mountains, on November 26, 1917. The first American mill began sawing near Gien, on the Loire River, November 29, 1917. Still earlier, another company of the old 10th Engineers began cutting fifty-foot piling in the pine forests of the Landes, hauling them out of the woods on the running gear of army supply wagons, by man power. On the

Lt. Col. W. B. Greeley is Assistant Forester of the United States. He has had general charge of all forestry operations of the regiment and his administrative ability, his knowledge of forestry and lumbering had much to do with the successful work of the regiment. The French have honored him by presenting him with the Legion of Honor. Shortly before this honor was conferred upon him he induced the French government to reduce its bill against the A. E. F. for forest acquisition about 2,000,000 francs.

Editor, American Forestry Magazine.

date when the armistice was signed, the 20th Engineers were operating eighty-one American sawmills in France and cutting 2,000,000 feet of lumber, ties, poles and piling every working day. One year after the first American saw bit into its first log in France and shrilled defiance at the Kaiser, the forestry troops of the American Expeditionary Forces had cut 300,000,000 board feet of lumber and ties, 38,000 piles, 2,878,000 poles of all sizes, and 317,000 cords of fuelwood. It is impossible, in a few words, to tell of the labor, the Yankee ingenuity, and the resolution to back up our fighting doughboys which were



A LOG CABIN BUILT NEAR PONTENX, LANDES, FRANCE, BY A SQUAD OF AMERICAN RIVER DRIVERS IN THE 20th REGIMENT.
THE FRENCH NEVER USE WOOD SO LAVISHLY IN BUILDING



OFFICE BUILDING AT CAMP OF THE 20th ENGINEERS IN FRANCE



MILL OF 20th ENGINEERS IN MOUNTAINS OF EASTERN FRANCE. LARGE TIMBERS BEING LOADED ON TRAILERS READY FOR HAULING TO THE RAILWAY

called for to win these results. Nor is it possible to describe the pressure upon all of us during the summer and fall of 1918 when every lumberjack in the regiment felt the tenseness of the final grapple and put everything he had into it. I will never forget the big mill at Eclaron as I saw it one October night—sparks streaming from its stacks, its two carriages flashing back and forth, loads of oak logs creaking up to the mill deck, cars being shunted about, ties loaded into them hot from the saws, and the sober, earnest faces of the men as they worked under the electric lights. They were shipping 5,000 ties daily to the Argonne offensive. That scene was typical of the eighty or more forestry operations in France during the great drive. It is doubtful if American resourcefulness was ever put to a harder test than during the first months of the forestry work

in France. One company of the 4th Battalion began skidding ties with harness made out of ropes and old sacks, and bridles fashioned from twenty-penny nails and wire. This "hay-wire" camp speedily made off with the monthly records of the section for tie production. During the long, anxious wait for the arrival of the American sawmills, French mills of various antique designs were utilized at many points. On his introduction to one of these, a millwright from the northwest offered to eat its daily cut. The French mills were aggravations of the flesh and promoters of profanity. They all had to be bolstered up, more or less rebuilt, have carriages devised out of any odd lots of machinery at hand, and new saws added. Poor as they were, they served to tide the army over its first few months in France, and their production under the "ancient regime" was



AN AMERICAN FORESTRY ENGINEER AT THE WATER BAG WHICH CONTAINS THE CAMP'S SUPPLY OF DRINKING WATER. THE ROOF OVERHEAD KEEPS THE SUN OFF THE BAG, AND A DITCH CARRIES AWAY THE LEAKAGE



BARBED WIRE STAKES, TO BE USED LATER AT THE FRONT, CUT AND STACKED ALONG BROAD GAUGE RAILWAY IN A HARDWOOD FOREST IN CENTRAL FRANCE



LOADING MARITIME PINE PILING IN SOUTHWESTERN FRANCE, NEAR PONTENX, LANDES



ANOTHER TYPE OF THE 20-M AMERICAN SAWMILLS USED BY THE AMERICAN FORESTRY AND LUMBERING TROOPS IN FRANCE

doubled or trebled by the lumberjack soldiers.

As the American mills were installed and production jumped month by month, fierce joy of rivalry seized the souls of the forest engineers. Time would fail to tell of the early contest between A and B Companies of the 10th Engineers, when records stood but a day or two and our "ten-thousand" mills showed up as twenty-five and thirty thousand a day producers. The largest day's cut at any forestry operation was turned out by the 27th Company at Mouthe, which in 23 hours and 35 minutes cut 177,486 board feet of fir lumber and timbers on a "twenty-thousand" mill. The largest twenty-hour cut, 163,376 feet, was made by the 37th Company (Old F Company of the 10th Engineers) at Levier with the same type of mill and product. The 26th Company at La Cluse holds the record for a twenty-hour run with a "ten-thousand" mill, 78,881 feet; close behind came the 24th Com-

pany with a record cut of 68,650 feet, the 30th with a cut of 63,849 feet, and the 49th Company at Murat, organized to build roads, with 63,000 feet. The 23d Company, at Marchenoir, holds the record for a twenty-hour cut with a "ten" mill in hardwoods, knocking off 55,539 feet. The 22d Company, at La Gavre, pushed its rival hard, however, with a twenty-hour cut of 49,416 feet of oak lumber and timbers. One of the best hardwood records is that of the 2nd Company, at Grande Mirebeau, which was determined to reach the million a month mark with a "ten" mill, and finally did so, in October, with a cut of 1,000,620 feet. One of the most remarkable achievements was that of the 19th Company, which in ten and one-half hours cut 64,047 feet of straight oak ties with a bolter mill rated at five thousand feet per day.

Small wonder that the American Lumberman has indicted the forest engineers of the American Expedi-



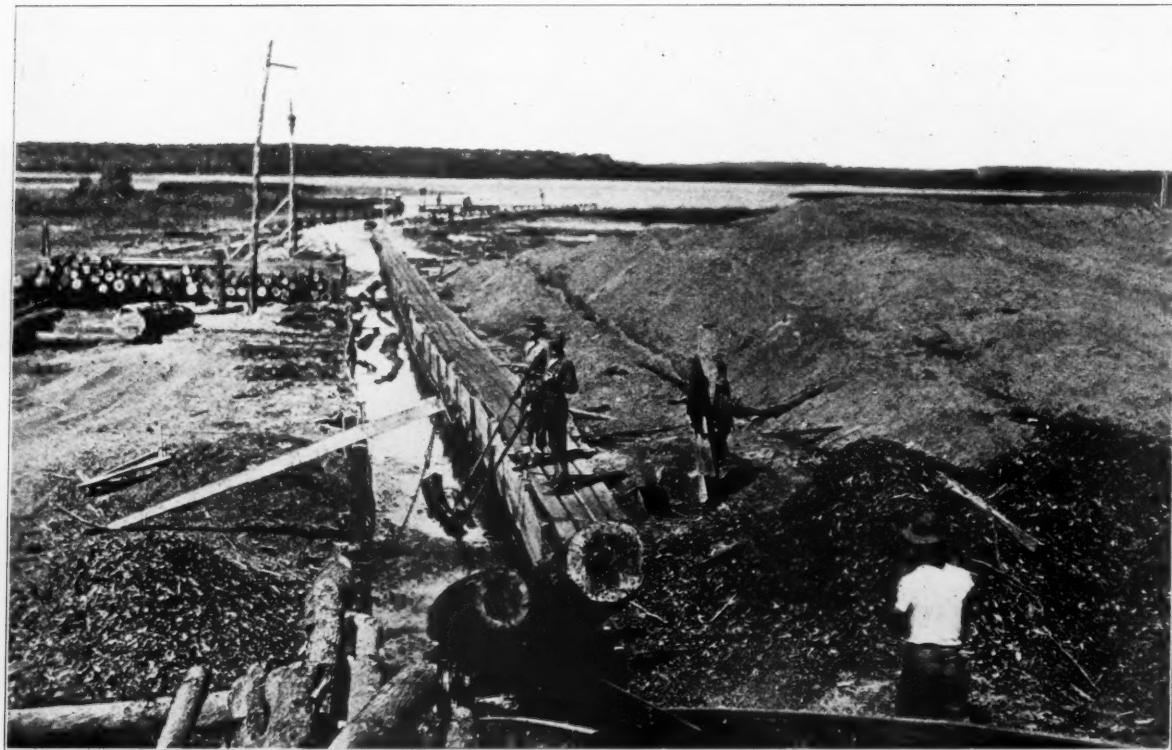
20th ENGINEERS FELLING LARGE BEECH TREE IN CENTRAL FRANCE



LOG DECKS ALONG A FLUME LEADING TO A MILL OF ONE OF THE COMPANIES OF THE 20th REGIMENT IN SOUTHWESTERN FRANCE



AMERICAN CAMP WITH TENTS "MUSHROOMED" IN THE SHADE OF A MARITIME PINE FOREST NEAR THE ATLANTIC COAST IN SOUTHWESTERN FRANCE



VIEW OF AUREILHAN LAKE, FRANCE, FROM AMERICAN 20-M SAWMILL. LOGS WERE TOWED ACROSS THE LAKE FROM THE MOUTH OF THE COURANT RIVER, BROUGHT TO THE BOOMS AT THE EDGE OF THE LAKE, THEN POLED ALONG THE CANAL TO THE POINT IN THE FOREGROUND WHERE THEY WERE LOADED UPON A SMALL CAR WHICH WAS PULLED BY CABLE UP THE INCLINE INTO THE SAWMILL. THE LARGE HEAP OF SAWDUST AT THE RIGHT WAS PRODUCED BY THE MILL AS THE RESULT OF SEVERAL MONTHS' OPERATION



A TRAIN LOAD OF TIES BEING TRANSPORTED BY NARROW GAUGE RAILWAY TO THE MAIN LINE IN THE MARITIME PINE FORESTS OF SOUTHWESTERN FRANCE

tional Forces for "cruelty to machinery." But the Hun wanted war—and, by the shades of the forest primeval, he should have it. It is difficult to stop in recording these instances of how the American lumberjack "tied into" their work in France. The 6th Battalion, working for the British Army at Castets, cut 124,242 feet in nineteen hours with a twenty-thousand Canadian sawmill, and 72,697 feet in twenty hours with a French band mill whose makers would have been aghast at such perform-

gineers contain records of twenty thousand foot mills set up and running fourteen days after the first machinery arrived; of a ten-thousand mill dismantled, moved fifty miles, re-set, and sawing on the eighth day; and of another "ten" mill moved about half that distance and sawing its first log forty-seven hours after the last log left its carriage at the old set. These were not holiday contests, staged after weeks of preparation. They are cited to illustrate the spirit of the 20th Engineers;



A LOG LANDING OF A 20th REGIMENT DETACHMENT IN ONE OF THE FORESTS OF FRANCE

ances. The 13th Company, at Brinon, cut 1,361 pine logs on a "ten" mill in twenty hours, with a yield 53,895 feet of lumber. Many of the American "twenty" mills cut steadily upwards of 1,200,000 board feet per month, and several of them exceeded 2,000,000 feet monthly on their best runs. The spirit of "hitting her hard" pervaded every camp. The 19th Service Company, at Collonges, not to be outdone by the chesty mill crews, organized a fuelwood contest in which 100 black soldiers averaged 6.31 cubic meters of cut wood daily for a week. It is even rumored that a red-headed captain of the old Tenth, learning from his own spies that his monthly record was in jeopardy, connived with his men to put on a Sunday night shift, something strictly tabooed by the Forestry Regulations. The annals of the 20th En-

gineers contain records of twenty thousand foot mills set up and running fourteen days after the first machinery arrived; of a ten-thousand mill dismantled, moved fifty miles, re-set, and sawing on the eighth day; and of another "ten" mill moved about half that distance and sawing its first log forty-seven hours after the last log left its carriage at the old set. These were not holiday contests, staged after weeks of preparation. They are cited to illustrate the spirit of the 20th Engineers;

In the spring of 1918 came orders to furnish 15,000 piling in lengths up to 100 feet, with all possible haste. These timbers could not be brought from the United States and were essential to complete the docking facilities required by the rapid increase in the American Expeditionary Force. Again the resourcefulness of the forest engineers was put to the test, for every nook of France had to be scoured for long timbers and practically every tree that was large enough had to be cut—no matter where it stood. The 2d Battalion—up in the Vosges Mountains—covered itself with glory, get-



AN AMERICAN 20-M SAWMILL IN THE SAND DUNE COUNTRY OF SOUTHWESTERN FRANCE, NEAR THE COAST. MARITIME PINE FOREST IN THE BACKGROUND.



AMERICAN FORESTRY ENGINEERS IN FRONT OF TENTS IN THEIR CAMP AT ST. DIZIER, HAUTE MARNE



HAULING PILING 60 TO 80 FEET LONG BY MEANS OF MACK TRUCK AND TRAILER FROM THE FOREST TO THE SHIPPING POINT IN EASTERN FRANCE



CAR LOAD OF MARITIME PINE LOGS BEING DUMPED INTO AUREILHAN LAKE TO BE TOWED TO THE AUREILHAN AMERICAN SAWMILL NEAR PONTENX, LANDES. NARROW GAUGE RAILWAY SHOWN. THE MULES BRING THE LOGS FROM THE PINE FORESTS OF THE SAND DUNES.



LOADING MARITIME PINE LOGS ON NARROW GAUGE RAILWAY CARS FOR TRANSPORTATION TO AMERICAN 20-M MILLS IN SOUTHWESTERN FRANCE. THE PINE FOREST IS HERE CUT CLEAN. BIG WHEELS USED TO SKID LOGS TO THE RAILWAY SHOWN AT THE RIGHT.

ting out 9,399 "long and straight" ones faster than the docks could use them. Nor was it a simple trick to get 90 and 100-foot sticks out of the little gullies and down the long, winding roads of the Vosges. The 5th Battalion, meanwhile, was running an express train service with tractors and steel-tired trailers—taking out 80-foot spruce piles over ten miles of French highways. This Battalion furnished over 5,000 piles for the American docks.

New demands upon the forestry troops followed the formation of the American First Army. A flying squadron of lumberjacks was organized by the 2nd Battalion, to work in small units with portable mills at the advance Engineer dumps and cut from day to day bridge timbers, mine sets, bomb proofing—the material most urgently required and which could not be forwarded quickly enough from the rear. All told, the 20th Engineers operated thirteen of these advance camps. Their lumberjack soldiers had a real taste of work close to the front, with frequent occa-

sion to take shelter from bombardments and night bombing raids. And it was while scouting for a new camp in the Argonne that Capt. Harry H. McPherson and Lieut. Wilford A. Fair, of the 20th Engineers, were shot down by German machine-gunners.

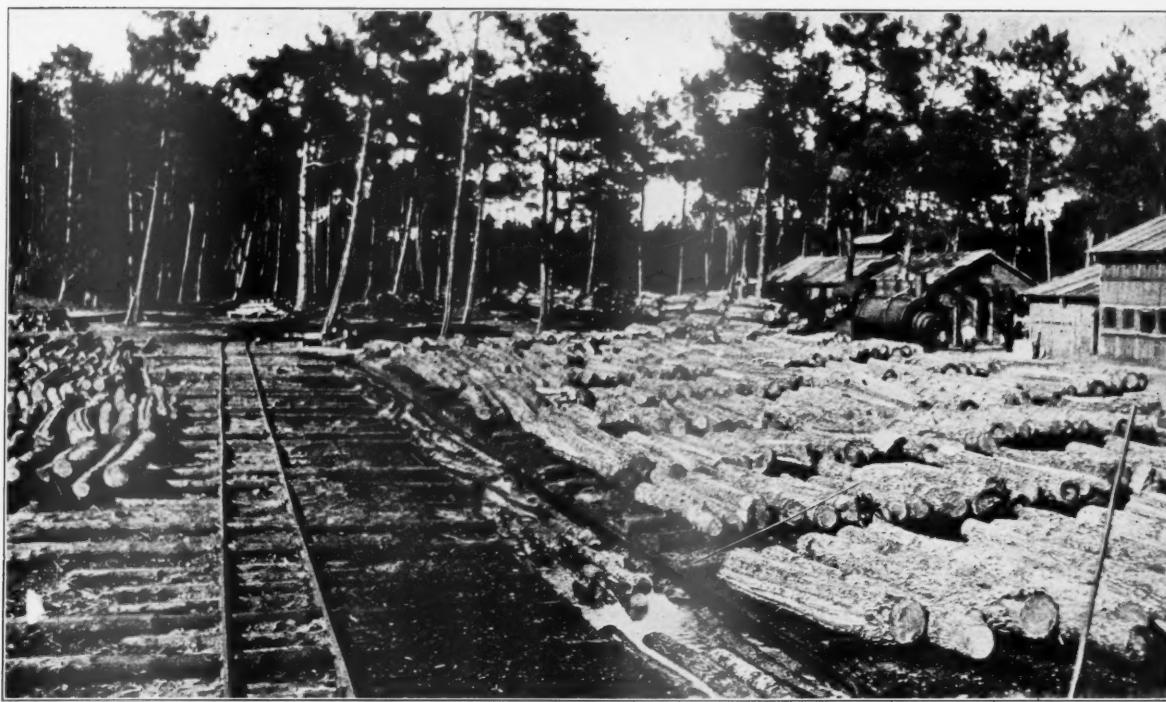
Last December Colonel James A. Woodruff, commanding the 20th Engineers, summed up the work of the twelve thousand odd lumberjacks comprising the regiment in a general order which was a cordial commendation. (See page 1092.)

Not all of us were permitted to share in this achievement. With sorrow but with pride the 20th Engineers recall the ninety-one men of the 6th Battalion who won their golden stars on the transport *Tuscania*. The story is best recorded in the words of an officer of that battalion:

"On the morning of the eighth day out from Halifax, the convoy was met by seven British destroyers, which romped along like porpoises in the heavy seas. With this protection everybody on board felt pretty safe, especially



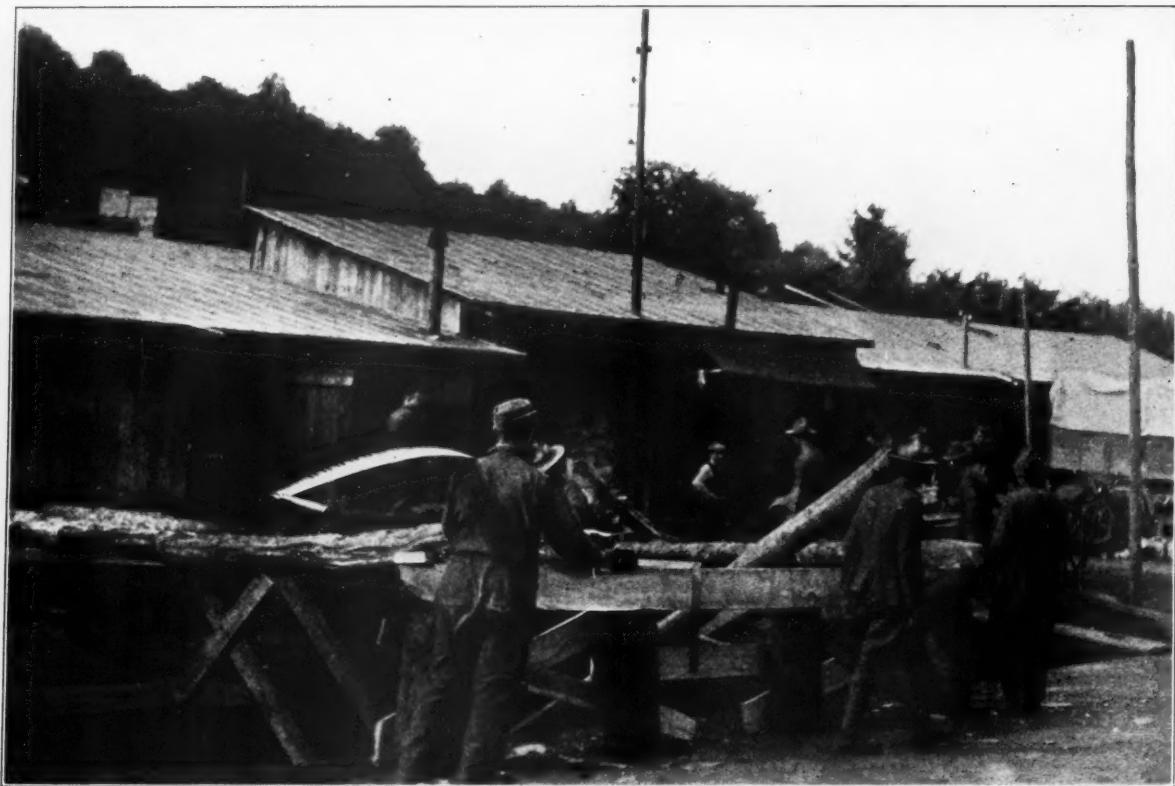
AN OFFICER OF THE 20th ENGINEERS AT A BATTALION HEADQUARTERS IN FRANCE.



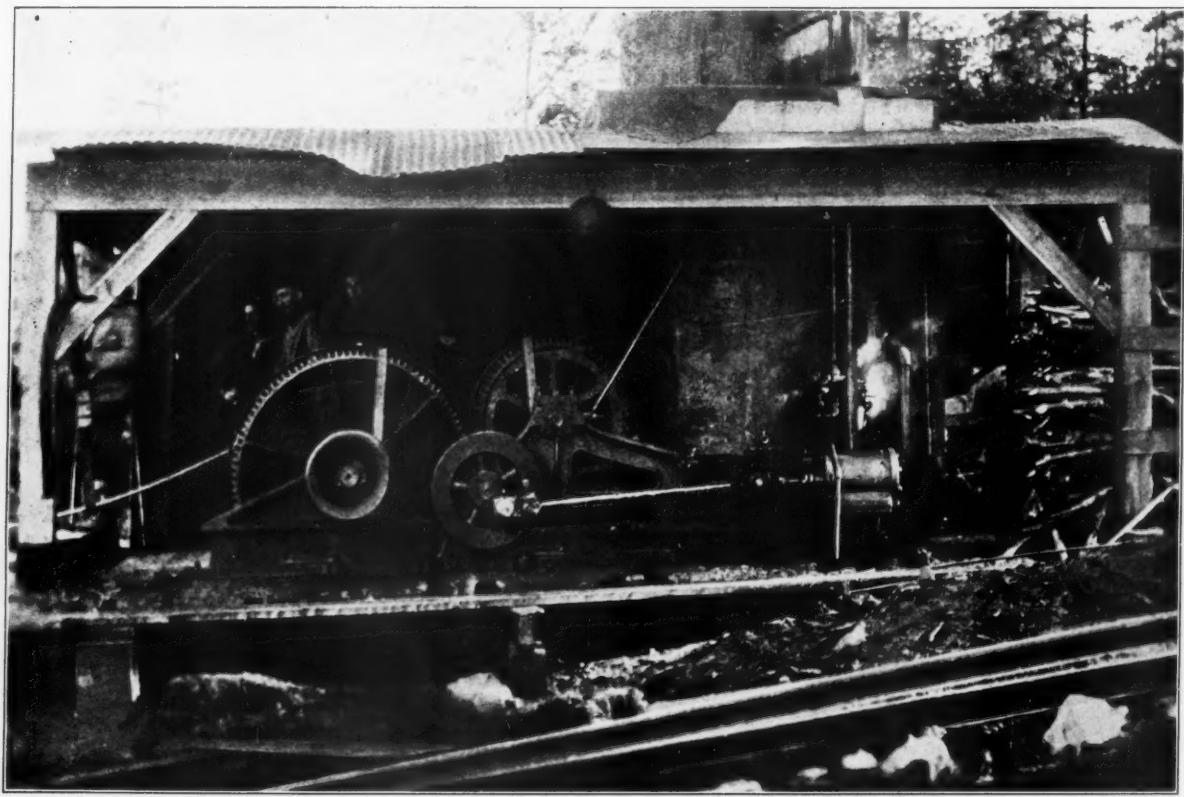
LOG TRAIN AT THE RIGHT COMING FROM THE MARITIME PINE FOREST TO THE LABROQUETTE 20-M AMERICAN MILL NEAR PONTENX, LANDES. THE LOGS ARE UNLOADED ON TO SKIDS AND ARE THEN ROLLED INTO THE FLUME IN THE FOREGROUND, ALONG WHICH THEY ARE FLOATED TO THE MILL. THE LOGS ARE LIFTED FROM THE FLUME INTO THE MILL BY CHAINS. MARITIME PINE FOREST IN THE BACKGROUND



HARDWOOD LOGS DECKED NEAR MILL. LOAD OF LOGS JUST GOING TO MILL ON MOTOR TRUCK. THINNED HARDWOOD FOREST IN BACKGROUND



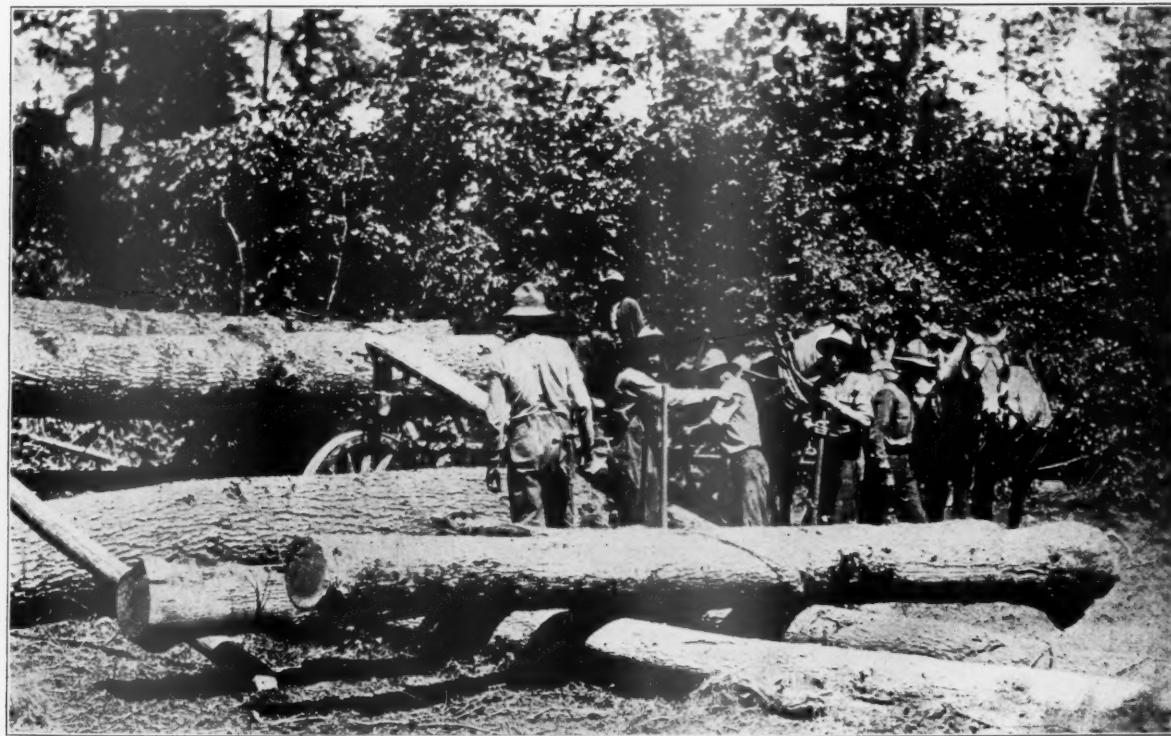
GENERAL VIEW OF AN AMEX MILL OF THE 20th ENGINEERS IN FRANCE



A 10 x 13 LOGGING DONKEY ENGINE USED TO LET THE CARS LOADED WITH LOGS DOWN A 72% GRADE FROM THE CUTTING ON A HILLSIDE TO A 20th REGIMENT SAWMILL NEAR EPINAL, IN FRANCE



AMERICAN 20-M SAWMILL NEAR PONTENX, LANDES. COL. BENEDICT WITH HIS BACK TURNED, IN THE FOREGROUND, STANDING NEAR NARROW GAUGE TRACK OVER WHICH LUMBER IS TRANSPORTED THREE MILES TO THE SHIPPING YARD



LOADING HARDWOOD LOGS ON LOG TRUCK IN FOREST OF CENTRAL FRANCE

when, on the afternoon of February 5, the shores of Ireland and Scotland hove in sight. But at 5.45 that evening came a bing! bang! With the crash all lights went out, due to the electric plant being put out of commission, and the ship was left in absolute darkness. The men came pouring up onto deck from their quarters, two or three decks below; flares were lighted and everybody set to work lowering the life boats. In many cases, the members of the crew assigned

to do but wait and see what would happen next. No more destroyers seemed inclined to come to the rescue of the ill-fated 700. The Tuscania listed more and more to starboard; the flares burned out, leaving the ship in darkness. The chances of those left on board grew slimmer and slimmer as the icy water crept up closer and closer to the starboard rail. Then, slowly and quietly, out of the black night a long, black destroyer slipped alongside and, by pumping overboard forty tons



SMALL TOPS BROUGHT FROM THE FRENCH FOREST TO BE PILED UP NEAR THE MAIN RAILWAY LINE FOR USE AS FUEL. THIS SCENE IS IN THE SAND DUNE COUNTRY NEAR THE COAST IN SOUTHWESTERN FRANCE

to the boats failed to put in an appearance, and the soldiers, unaccustomed to this work, had to get the boats away as best they could. Some boats were unsuccessfully launched, causing their occupants to be thrown into the icy water. After all available boats and rafts had been launched and two loads of men had been taken off in two British destroyers, which came alongside, 700 men were still left on board with nowhere to go and nothing

of oil, was able to accommodate all those left on the sinking ship."

During the long wait, one of the companies of the 20th, after seeing comrades drowned in front of them, and not knowing what was in store for themselves, stood in line in perfect order and sang "Where do we go from here, boys? Where do we go from here?"

LAGUNA MOUNTAIN RECREATION AREA

AN important new development of recreation in the open is taking place in San Diego county on the Cleveland National Forest, in California. This is the Laguna Mountain recreation area, very careful plans for which were worked out in advance by the United States Forest Service. The plans are being carried out under expert supervision, and the Forest Service has already spent about \$60,000 in the development of the area. It is situated only fourteen and one-half miles from the San Diego-Imperial Valley State highway, with which

it is connected by an excellent automobile road. It can be reached in a few hours by the people of the hot interior valleys. It has both public camping-grounds and private lots, which are leased to individuals for a term of years, thus making it worth while for the lessees to build substantial cabins. Many people are already taking advantage of the opportunity, and Laguna Mountain bids fair to become one of the best outing areas in Southern California.

THE FOREST ENGINEERS

By LT.-COL. HENRY S. GRAVES

THE Forest Engineers performed a very important service in the war. For the first time in history, it was necessary to organize military forces specially trained and equipped for work in the forest, and when the call came the foresters and lumbermen responded eagerly. There was developed an organization of splendid efficiency—a fine body of experienced men, well officered. They adapted themselves quickly to the conditions under which they had to work, and met the burdens placed upon them with a fine spirit of self-sacrifice. They had many difficult conditions to meet and many obstacles to overcome, and they succeeded in their task. They richly deserve the praise which has consistently been bestowed upon them.

The first call for foresters and lumbermen came through a request made by General Bridges, of the British Mission, soon after we entered the war, for a thousand men to work in the woods behind the British lines. To meet this request, the War Department decided to organize an engineer regiment, and asked for assistance from foresters and lumbermen in the recruiting of the force. Col. J. A. Woodruff, of the Corps of Engineers, was given the command, and his work in organizing the 10th Engineers, and later in directing all the forestry forces in France, was of exceptional merit. He has already received well earned honor in France; and American foresters and lumbermen are unanimous in their praise of his work and his leadership.

The French government also made a request through Marshal Joffre for a thousand men to help in the forests behind the French lines. It became apparent, however, very soon after the arrival of General Pershing and his staff in France, that the requirements of our own army would necessitate the use of the first forestry troops for the American armies. It was necessary, therefore, to defer giving direct assistance to the British and French. Fortunately, it proved possible to fulfill our obligations to our allies in this matter before the end of the war.

The first division of the army reached France early in the summer of 1917. There was immediate need for lumber, not only for barracks but for a great variety of miscellaneous purposes. The assistance given us by the French and British before the Forest Engineers with their equipment could arrive and begin the manufacture of lumber was very substantial, and was given at a time when both the British and French armies needed for their own uses, while battles were going on, every bit of wood and timber they could possibly secure. It was, however, at best a lean time for the American armies until the Forest Engineers could begin sawing operations.

The first battalions of the Forest Engineers arrived in France early in October, 1917. They had some of their

woods equipment with them, but it was some months before their sawmill material and all of their logging and transport equipment arrived. Pending the arrival of this equipment, they found themselves in a difficult position. There was a great need for lumber for the armies, and though the forestry troops were at first inadequately equipped, were expected to produce it. It was an inspiration to see the way the troops adapted themselves to the conditions, put in their time efficiently, produced timber which could be used for various engineering purposes, and prepared the way for the quick manufacture of lumber when the mills should arrive.

When the equipment did arrive, all of the preliminary work in the careful selection of officers and men and in the preparatory work in France began immediately to count. Every man swung into line and gave his utmost strength to the task at hand, with the result that the small portable sawmills were made to produce quantities unknown before. What seemed insuperable obstacles in the matter of transportation were overcome, and the lumber was actually gotten to the armies in time to render service at critical periods.

An important part of undertaking was the acquisition of timber and the location of operations. The French and British representatives co-operated admirably in this matter, so that any possible competition between the Allies in the procuring of material and in prices was eliminated. The corps of men engaged in this work deserve a great deal of credit. Those in charge of the negotiations had a delicate task to perform in their relations with the Allied governments. The men in the field were carefully selected from among the foresters and logging engineers, and were successful in finding bodies of timber suitable for the armies' needs.

The high quality of the personnel of the Forest Engineers has been commented upon by every one familiar with the organization. To this fact and to the able leadership of the officers in charge is due the unqualified success of the work. To set apart the names of those to whom credit is due would be to take many a leaf from the regimental muster roll, from Colonel Woodruff and Lieutenant-Colonel Greeley, the two men who carried the chief burden of the enterprise; Colonel Mitchell, who organized the 20th; Lieutenant-Colonel Kelley and Johnson, at headquarters, and Lieutenant-Colonel Woolsey and Major Moore, who negotiated the purchases with the French, through a long list of officers and men. Those who participated in the forestry work in France may well be content with their record. The forestry and lumber fraternity is very proud of what they accomplished.

ORGANIZATION OF 20TH ENGINEERS (FORESTRY)

BRIG. GENERAL EDGAR JADWIN
DIRECTOR OF CONSTRUCTION & FORESTRY

COL. J. A. WOODRUFF
C. O., 20TH ENGINEERS & DEP. DIR. C. & F.

CENTRAL HEADQUARTERS, ENGINEERS (FORESTRY)

LIEUT.-COL. W. B. GREELEY
Chief, Forestry Section

<i>Acquisition of Timber</i>	<i>Technical Equipment and Operation Supplies</i>	<i>Product and Shipment</i>
LIEUT.-COL. GREELEY	LIEUT.-COL. KELLY	LIEUT.-COL. JOHNSON
MAJ. WOOLSEY	MAJ. KIEFER	MAJ. GRANGER
CAPT. HALL	CAPT. WORK	CAPT. LAMMERS
	LIEUT. TAYLOR	

Fuelwood Project, Advance Section

LIEUT.-COL. PECK CAPT. BRUCE
MAJ. STUART CAPT. KITTREDGE

Military Administration Personnel

CAPT. G. P. GRAHAM
Adjutant

Welfare

CHAPLAIN WILLIAMS

SECTION FORESTRY OFFICER
BASE SECTION No. 2

SECTION FORESTRY OFFICER
ADVANCE SECTION

LIEUT.-COL. BENEDICT
MAJ. W. L. LaLONDE

LIEUT.-COL. CHAPMAN

DISTRICTS
Pontenx Mimizan
Dax Lapit

DISTRICTS
Epinal Eclaron
Dijon Besancon

BATTALION AND DISTRICT COMMANDERS

DAX—1st Battalion,
MAJOR BROOKINGS
EPINAL—2nd Battalion,
MAJ. JOHNSON, s. o.
DIJON—3rd Battalion,
MAJOR SANBORN
MIMIZAN—4th Battalion,
CAPTAIN PHIPPS

GIEN—5th Battalion,
CAPT. LYNCH
LAPIT—6th Battalion,
MAJOR KELLOGG
CHATEAUROUX—
7th Battalion,
CAPTAIN MAAS
BAUGE—8th Battalion,
CAPTAIN VAIL

BOURG—9th Battalion,
MAJOR BARNES
BOURGES—
10th Battalion,
MAJOR HINKLEY
PONTENX—
11th Battalion,
MAJOR LAFON

BESANCON—
12th Battalion,
MAJOR KELLY
ECLARON—
13th Battalion,
MAJOR SPENCER
LEPUY—
14th Battalion,
MAJOR BARTELME

20th ENGINEERS (FORESTRY) RECORD OF DEVELOPMENT AND PRODUCTION

1. The 10th Engineers arrived at Nevers October 9, 1917.
2. All units of 10th Engineers arrived at their assignments by November 1, 1917.
3. The first mill to operate was a French mill which commenced sawing on November 25, 1917 at Levier (Doubs).
4. First American mill commenced on November 27, 1917, at Mortumier operation, near Gien (Loiret).
5. On December 1, 1917, 3 mills were in operation—2 French and 1 American.
6. Production in December, 1917: Lumber, 321 M.B.M.; Piling, 205 pieces; Ties, 12,031 pieces; Poles, 20,025 pieces; Logs, 33,864 pieces; Cordwood, 4,164 steres; Faggots, 1,500 steres. During December, 1917, 2 American and 4 French mills were operating.
7. 1st Battalion of 20th Engineers arrived November 28, 1917.
8. First mill of 20th Engineers commenced operation on or about January 15, 1918, at Mur-de-Sologne (Loir-et-Cher).
9. The following entries show the production by months and number of mills in operation at end of each month:

JANUARY—10 mills operating. Production: Lumber, 1,369 M.B.M.; Piling, 740 pieces; S. G. Ties, 815 pieces; Small Ties, 7,100 pieces; Misc. R. P., 29,740 pieces; Cordwood, 3,303 steres.

FEBRUARY—21 mills operating. Production: Lumber, 2,892 M.B.M.; Piling, 720 pieces; S. G. Ties, 22,345 pieces; Small Ties, 14,856 pieces; Misc. R. P., 460,662 pieces; Cordwood, 12,433 steres; Faggots, 200 bds.; Road Plank, 1,700 pieces; Bridge Ties, 200 pieces.

MARCH—34 mills operating. Production: Lumber, 6,965 M.B.M.; Piling, 857 pieces; S. G. Ties, 80,099 pieces; Small Ties, 60,100 pieces; Misc. R. P., 270,496 pieces; Cordwood, 15,932 steres.

APRIL—41 mills operating. Production: Lumber, 14,578 M.B.M.; Piling, 1,513 pieces; S. G. Ties, 152,654 pieces; Small Ties, 104,685 pieces; Misc. R. P., 334,556 pieces; Cordwood, 23,899 steres.

MAY—48 mills operating. Production: Lumber, 18,253 M.B.M.; Piling, 11,760 pieces; S. G. Ties, 178,988 pieces; Small Ties, 122,797 pieces; Misc. R. P., 221,555 pieces; Cordwood, 47,794 steres.

JUNE—59 mills operating. Production: Lumber, 26,727 M.B.M.; Piling, 7,576 pieces; S. G. Ties, 265,151 pieces; Small Ties, 150,359 pieces; Misc. R. P., 190,742 pieces; Cordwood, 67,500 steres.

JULY—59 mills operating. Production: Lumber, 24,102 M.B.M.; Piling, 3,296 pieces; S. G. Ties, 298,163 pieces; Small Ties, 172,619 pieces; Misc. R. P., 227,865 pieces; Cordwood, 90,487 steres.

AUGUST—66 mills operating. Production: Lumber, 30,601 M.B.M.; Piling, 1,934 pieces; S. G. Ties, 384,960 pieces; Small Ties, 136,143 pieces; Misc. R. P., 446,069 pieces; Cordwood, 166,339 steres.

SEPTEMBER—80 mills operating. Production: Lumber, 30,307 M.B.M.; Piling, 3,653 pieces; S. G. Ties, 517,178 pieces; Small Ties, 133,896 pieces; Misc. R. P., 574,205 pieces; Cordwood, 144,178 steres.

OCTOBER—81 mills operating. Production: Lumber, 29,134 M.B.M.; Piling, 6,905 pieces; S. G. Ties, 692,208 pieces; Small Ties, 106,588 pieces; Misc. R. P., 248,826 pieces; Cordwood, 151,464 steres.

10. On October 31, 1918, there were 81 mills in operation. Total strength of forestry troops in France that date (20th Engineers plus Service Companies), 360 officers and 18,183 enlisted men; aggregate of 18,543 on forestry work. No record is available as to actual status on November 11, 1918.

11. On October 31, 1918, there were actually 84 going operations.

12. On November 11, 1918, 14 district headquarters were administering the work of the forestry troops.

13. On November 1, 1917, 2 district headquarters were established, one at Ponteux-les-Forges (Landes) and the other at Levier (Doubs), Besancon taking its place.

14. On September 9, 1918, Major Benedict was named as Section Forestry Officer at Bordeaux and took over duties on October 1, 1918. On September 9, 1918, Major Chapman was named as Section Forestry Officer at Nogent-en-Bassigny (Haute Marne) and took over his duties on September 16, 1918. The headquarters of the latter were moved to Neufchateau (Vosges) on October 21, 1918.

15. All forestry units combined October 18, 1918, per G. O. 47, S. O. S. of that date.

16. Lt. Col. Greeley arrived in France August 21, 1917, accompanied by 2 officers and 9 civilians. The officers were First Lieut. Stanley L. Wolfe and First Lieut. Clarence E. Dunston; the civilians (all later commissioned) were Theodore S. Woolsey, Donald Bruce, Swift Berry, R. Clifford Hall, Ralph C. Staebner, Fred B. Agee, William H. Gibbons, Joseph Kittredge and W. H. Galleher.

17. Lt. Col. Graves and Major Moore arrived June 20, 1917.

18. Forestry Section established as a part of the Engineer Supply Office September 25, 1917.

19. Prior to September 25, 1917, Forestry Section was a part of Office of Chief Engineer, A. E. F. (Gen. Taylor).



PARTS OF TRESTLE BUILT BY THE 20th ENGINEERS IN THE MARITIME PINE FOREST IN THE LANDES, IN SOUTHWESTERN FRANCE TO TRANSPORT FOREST PRODUCTS FROM THE WOODS TO THE MAIN LINE



MARITIME PINE RAILWAY TIES PILED READY FOR SHIPMENT; ALSO LUMBER PRODUCED AT AMERICAN SAWMILL IN MARITIME PINE FOREST IN SOUTHWESTERN FRANCE

FRENCH FORESTS IN THE WAR

By MAJOR BARRINGTON MOORE

AFTER the first two years of the war, the tonnage shortage made it impossible to ship wood to France, except aeroplane stock and the like, for wood is very bulky and the necessary shipping would have been enormous, more than could possibly have been spared with safety. Yet wood is a military necessity.

The ports of France were not built with a view to the landing of large armies, and were wholly inadequate; yet the speedy debarkation of the troops, with their munitions and supplies, had to be assured at all costs. The submarines forced the ships to come in convoys of ten or fifteen at once, requiring several times the docking space the same number of ships would have needed singly. Wharves, miles of wharves, were of immediate necessity. For this we must have piling and wharf timbers.

But, once the troops and supplies were landed, our difficulties did not end. It was necessary to find shelter for them. Sacks of flour cannot be left out in the rain. Warehouses became necessary, warehouses of gigantic size and capacity. Railroads had to be laid in the warehouses, one depot alone requiring eighty-five miles. Lumber for these warehouses had to be furnished immediately.

Wherever possible, we billeted our troops in houses to save barracks. But the crowded condition of the country, owing to the refugees from Belgium and the invaded parts of France made this inadequate. Our men

were dying of pneumonia. We simply had to have barracks. Every suitable building that could be found anywhere in France was turned into a hospital, but yet there were not enough. We required large quantities of lumber for hospitals.

After the army was landed, its supplies cared for, and the men were in billets or barracks—in all of which wood plays the leading role—the army must be moved forward. As a matter of fact, it had to be moved forward even before the preparations for landing were completed. Everything was done under the utmost tension, and still not rapidly enough.

The transportation of men and guns, with munitions and supplies, required the construction of new railroad lines and the double-tracking of others. Ties became more important than guns, because without the railroads the guns could not be brought to the front. When the Germans broke through in March and got within close range of Amiens, they paralyzed the main artery between the French and British armies. Another railroad had to be built, and built quickly. Fortunately, the Canadians had ties ready cut for an emergency.

In order to permit one organization to communicate quickly with another, it was necessary to construct telephone and telegraph lines. This called for thousands and thousands of poles.

Cooking the food and keeping the men warm meant tons and tons of fuelwood.



A FRENCH FOREST DEVASTATED BY WAR. MILITARY WORKS VISIBLE, RIGHT CENTER

At the front, trenches and other defensive works called for large numbers of props, barbed wire pickets, and other round material.

To bring up the artillery quickly over the shell-torn ground, it was necessary to build hasty roads with five-inch plank. The amount of lumber consumed as road plank was enormous.

Add to the foregoing an insistent demand for lumber to make packing cases and for countless smaller uses, and you will have some slight conception of wood as a military necessity.

chief of the French transportation system, told us with vivid emphasis that failure to send forestry troops promptly would spell disaster. General Pershing was so anxious about the situation that he personally dictated an urgent cable asking the War Department to stop sending fighting men until they had first sent forestry troops.

But, what will be the use of sending forestry troops and sawmills unless there is enough standing timber? The vital question then was, did France possess enough standing timber to fill the indispensable requirements not only of their own army and civil population, but of the



A PORTION OF THE FIRST AMERICAN FORESTRY CAMP, WITH OFFICE TENT AND Y. M. C. A. HUT IN CENTER, LOCATED AT BELLEVUE, LANDES, FRANCE

We had not been in France long before this necessity for lumber faced us in terrible earnestness. Our Army engineers had always found at hand whatever materials they needed, and they drew up elaborate plans accordingly. The Chief of Engineers of the A. E. F. called in Colonel Graves and made him responsible for furnishing the lumber to carry out these plans. Accordingly Colonel Graves and I went to work to procure it. We knew that the tonnage shortage prevented our importing it, but we understood that the French would fill our first requirements.

What was our dismay to learn that by furnishing us lumber the French had simply meant they would furnish us the trees standing in the forests. They had no piles, and they had not enough lumber or ties for themselves. Even worse, they had no labor. What were we to do? The situation was critical. Our troops were on their way over, and we had nothing built to receive them, nor any materials with which to build. We must have forestry troops and sawmills at once. Mr. Claveille, the

British army and the American army as well? The construction program of the American engineers called for lumber in quantities which staggered the French.

Fortunately, France did have the forests. The situation was saved, the war shortened by many long months. And why did she have them? Because she had practiced forestry for generations.

We must not imagine that she always practiced forestry. Like other countries, she began by destroying her forests. Eventually, however, she saw the disastrous effects of her recklessness, and gradually turned from destroying to restoring, and then to building up. For example, 100 years ago the southwestern corner of France, extending from Bordeaux to the Pyrenees Mountains, was almost as treeless as the prairie, and was fringed by sand dunes which were constantly in movement, burying fields and houses and even whole villages. Napoleon called in engineers and foresters. These men succeeded in holding the dunes in place by planting with maritime pine; and then they planted up

the whole interior of the region with the same tree. During the war this region was the largest source of lumber, not only for the French army, but for the British and American armies as well.

The French forests were, therefore, not simply nature's gift, but the fruit of conscious effort, applied with painstaking care and industry through long years.

Forestry to a Frenchman is the accepted way of handling forests. He cannot conceive of handling woodlands

timber that was ready to be cut, and even to sacrifice that which they would not normally have cut for ten or fifteen years. But they were firm against annihilating any forest, or cutting it in such a way that it could not recover with reasonable care. They, therefore, maintained absolute control over the methods of cutting. On the government owned forests, they were particularly strict, marking every tree to be cut and prescribing in detail the methods of brush disposal, etc. On private



THE OFFICERS' ROW AT BELLEVUE CAMP, LANDES, FRANCE, THE FIRST CAMP OF THE AMERICAN FORESTERS AND LUMBERJACKS

in any other way. In France everybody, even those who are not foresters or lumbermen, understands what forestry means. When you say you are a forester you don't have to stop and explain as you do in America. It is just as clear as if you said you were a lawyer or a doctor. This universal understanding of the aims of forestry is the most potent factor in the upbuilding of the forest resources of any country. It is to the interest of the lumberman to have a perpetual supply of timber to cut; it is to the interest of the wood using industries to have a permanent source of raw material; and it is to the interest of the country as a whole to be independent of outside sources of supply.

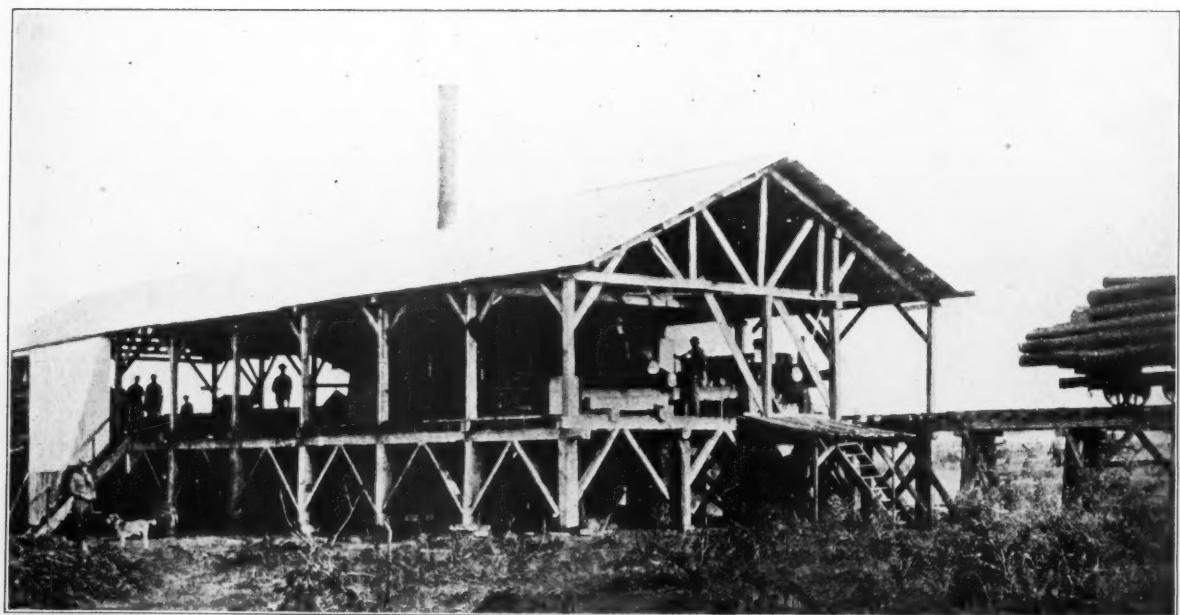
No wonder, then, that the French valued their forests, and were unwilling to have them needlessly destroyed. They did not forget the years of toil they had spent in creating them. They were willing to give up all the

lands the owner marked or designated in the contract those trees which he would sell. He also laid down the manner of brush disposal and other operations. Ultimate control was vested in a committee composed of representatives selected by the Minister of Agriculture, the Minister of Munitions as well as all other interested members of the cabinet, and representatives of the lumber industry. Under these conditions we had little choice as to methods of cuttings.

The operations were uniformly well carried out. The stumps were cut so low you could hardly see them; the tops were chopped into cordwood, and the slash thoroughly cleaned up. The cutting areas of the Canadians and Americans were generally better than those of the French wood merchants themselves. This goes to show that the lumberman can cut under forestry methods when he has to. He can do it even when subjected to the



LOAD OF HARDWOOD LOGS ON A WHITE TRUCK ON THE WAY TO ONE OF THE SAWMILLS OF THE 20th ENGINEERS



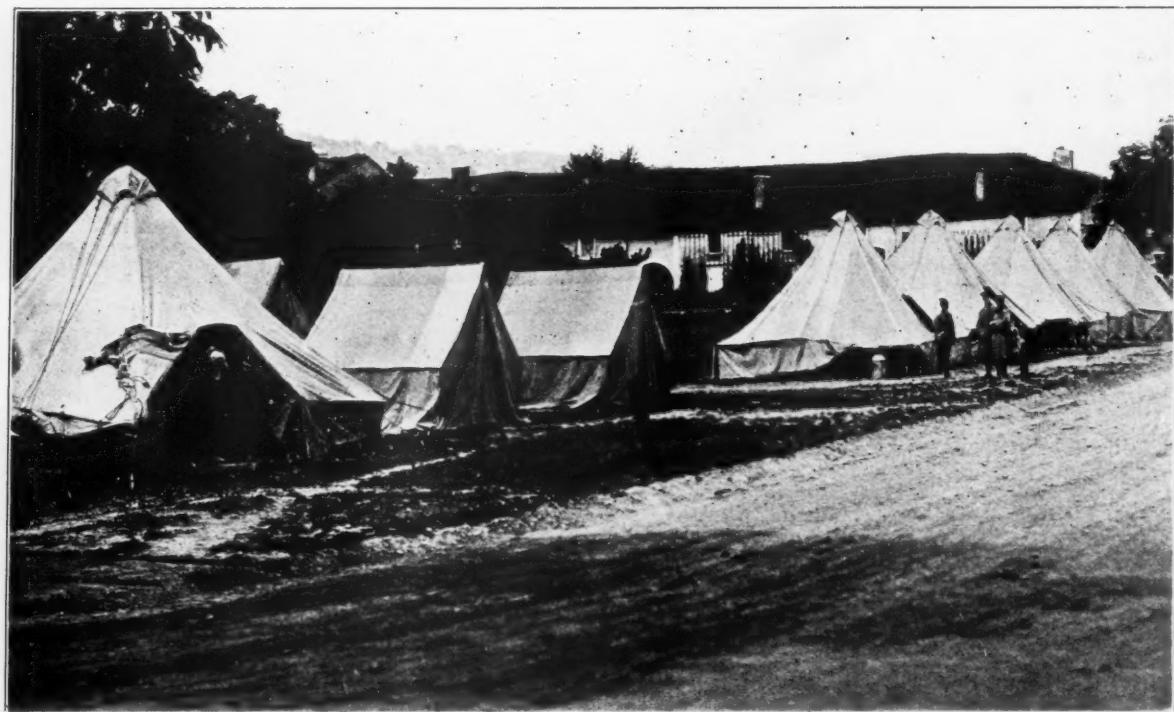
A 20-M AMERICAN SAWMILL OF THE 20th ENGINEERS. SOME OF THESE MILLS WORKED NIGHT AND DAY TO SUPPLY THE DEMANDS OF THE A. E. F. FOR LUMBER



LOAD OF LOGS WHICH HAS JUST BEEN LOWERED DOWN A STEEP INCLINE. THE CABLE BY WHICH THE CAR OF LOGS HAS BEEN LOWERED IS SEEN BETWEEN THE RAILS AT THE RIGHT.



INTERIOR OF 20th ENGINEERS SAWMILL IN FRANCE



CAMP OF A DETACHMENT OF THE 20th ENGINEERS IN SOUTHWESTERN FRANCE, SHOWING OLD STYLE FRENCH FARMHOUSE IN THE BACKGROUND

greatest imaginable pressure for quick production; and what is more, he does it well.

The organization of the American forestry section was patterned largely after that of the Canadian Forestry Corps. When Colonel Graves and I landed in France in June, 1917, we went first of all to the British Forestry Directorate at LaTouquet. Gen. Lord Lovat received us with the greatest friendliness, and gave us complete data which he had prepared in advance, covering his entire organization and equipment. Then, after a trip to the Canadian operations under Colonel Johnson on the government forest of LaJoux, in Eastern France, and after working over the information collected, we drew up a cable outlining the organization of the forestry troops required by the A. E. F. We based our requirements on an army of two million men, and asked for 18,000 forestry troops, of which 7,500 were to be skilled lumbermen, about 4,500 engineer troops for road and camp construction, and about 6,000 unskilled labor. At the same time we requested twelve officers to come over at once for overhead organization. These officers we asked for by name. They arrived in about two months, in time to be of great service in acquiring standing timber and other preparatory work. The unit of the Canadian Forestry Corps is the company. We made ours the battalion on account of our army regulations; it was hard at first to make our superiors see the need for elasticity. Forestry troops were an entirely new venture. The number of men in the actual operations depended entirely upon the needs of the case. Sometimes only 50 men would work together, and then again, we would have a thousand or more.

The standing timber was all bought through an inter-allied committee composed of French, British and Americans; later the Belgians were represented. We ourselves selected each forest, in company with a French officer, and then laid it before the committee. The negotiations with the owner, and purchaser, were done by the French. The French possessed the right of requisition, and used it effectively, saving millions of dollars and defeating the swarms of speculators which buzzed around us like flies around the honey pot. By persistent efforts we managed to acquire timber enough to keep ahead of the operations. But toward the end it was becoming more and more difficult to find reasonably accessible tracts. Accessibility was of prime importance in selecting timber, because of the need for rapid production. If the war had lasted, we would have been in a difficult position. When it ended, we were planning to do railroad logging in the mountains.

Logging conditions varied greatly. The southwestern pineries are as level as a table, except for the dunes along the edge. Central France is level or rolling, the chief obstacle being the heavy, sticky clay. Here the forests were mostly oak, which we cut into ties and road plank. The silver fir forests of Eastern France were in the mountains. Our chief trouble there was the narrow gauge railroads, which never had enough cars or engines. The same kind of narrow gauge railroads bothered us in other regions as well.

Last autumn, before the armistice was signed, our War Department planned to have four and a half million men in France by July, 1919. This meant an enormous increase in the lumber requirement. To meet it, we planned



UNLOADING LOGS FROM RAILWAY CAR AT AN AMERICAN SAWMILL



REMOVING LUMBER FROM TAIL END OF AMERICAN SAWMILL

to bring over 24,000 additional forestry troops, or a total of 42,000 men, 2,000 of which were to cut for the French and British. The men were already being recruited when hostilities ceased. Whether or not France could have furnished the timber for this force, as well as for the British and French armies, is difficult to say. Certainly we would have been hard put to it, and been compelled to operate some very difficult tracts.

We had to get ready cut lumber, ties, and piles for immediate needs pending the arrival of the forestry troops. We had to continue getting this class of material even after the arrival of the forestry troops, because the War Department increased the numbers of fighting men beyond what we had anticipated when we drew up the organization of the Forestry Section. The British and French helped us in this with wonderful generosity, giving us material from stocks sorely needed for their own armies. We developed to their utmost all European sources, Switzerland, Portugal, and even Spain. This

was so great that England cut down her importations of food to get tonnage to bring men over. The people went without sugar, they went without butter and other fats, they had almost no meat and a miserly slice of bread each day. They reduced themselves to the verge of starvation just to get a few more ships to bring soldiers to France. Had it not been for the forests of France, these ships, yes and even more ships, would have had to bring lumber instead of men.

We have seen, then, that wood is a military necessity, and that, owing to the shortage of ships, we could not have sent the necessary men and guns to France if there had not been the French forests to supply the wood. We have also seen that these forests are due to the efforts and industry of skilled foresters backed by the people.

In concluding, I wish to take this opportunity of expressing my profound admiration of the Canadian Forestry Corps, and deep appreciation of their generous and unfailing assistance. A finer lot of men I never hope



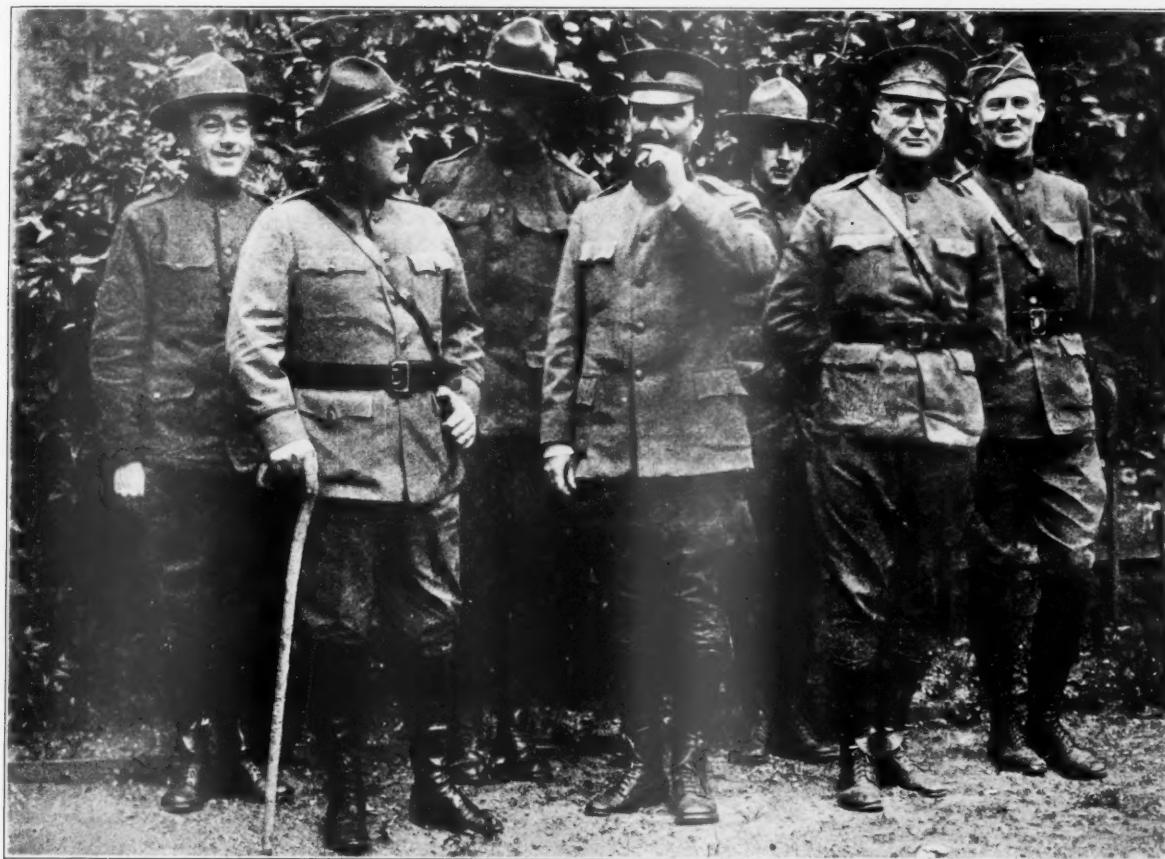
GENERAL VIEW OF ONE OF THE 20th REGIMENT SAWMILLS

last was the work with which I personally was most concerned after the arrival of the forestry troops.

When we consider that the modern army is helpless without wood, I think it is safe to say that the French forests were one of the big factors in winning the war.

Had not the standing timber been in France to cut, it would have been useless to send forestry troops, and we would have been compelled to use precious tonnage in bringing the wood to our armies. We all know how critical the situation was during the German drives from March to July. Every man and every gun was needed. The drive in March was checked by a handful of men who had never fought before, laborers, camp cooks, any one who could hold a rifle. The need of men and guns

to meet. When Colonel Graves and I landed in Bordeaux in June, 1917, wholly ignorant of what lay before us, Colonel Miller, in charge of the Canadians in the region, called upon us and not only extended to us every courtesy but gave us much valuable information. I have already spoken of the assistance we received in drawing up our organization. Colonel White was particularly helpful with friendly counsel. When our forestry troops had arrived but were unable to commence sawing because our mills had not yet come, General MacDougal lent us five Canadian sawmills, three of 20,000-foot and two of 10,000-foot capacity, with full equipment. I feel that I speak for all the American lumbermen and foresters in France when I say that we can never adequately repay our debt of gratitude to the Canadians.



A GROUP OF OFFICERS OF THE 20th ENGINEERS (FORESTRY) IN FRANCE



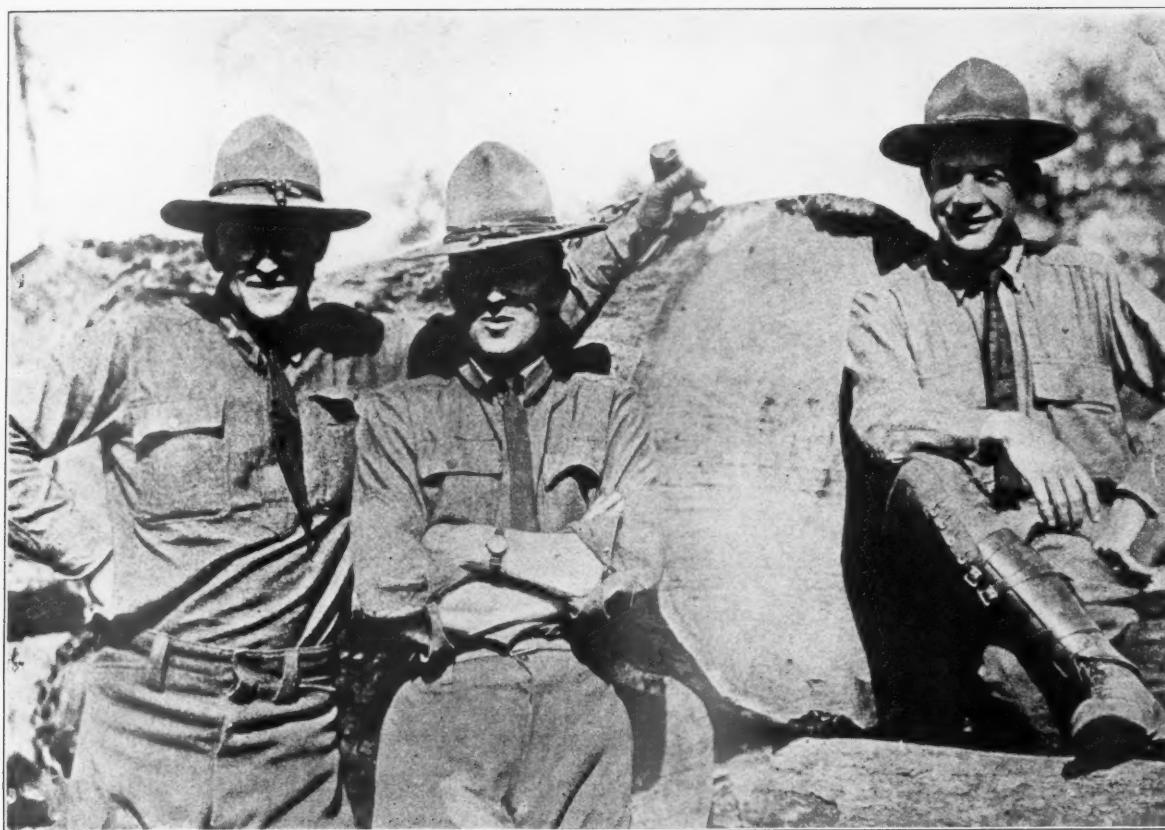
CAMP OF A DETACHMENT OF THE 20th ENGINEERS (FORESTRY) IN CENTRAL FRANCE



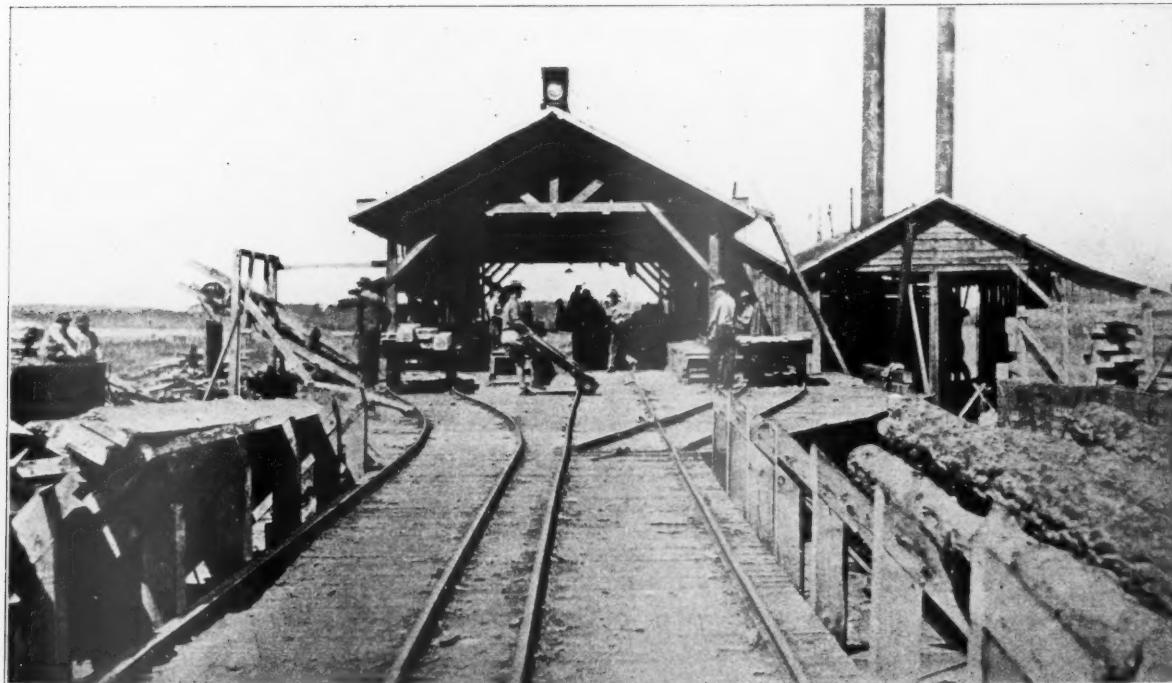
CAMP OF DETACHMENT OF 20th ENGINEERS IN FRANCE. CREW STARTING TO WORK



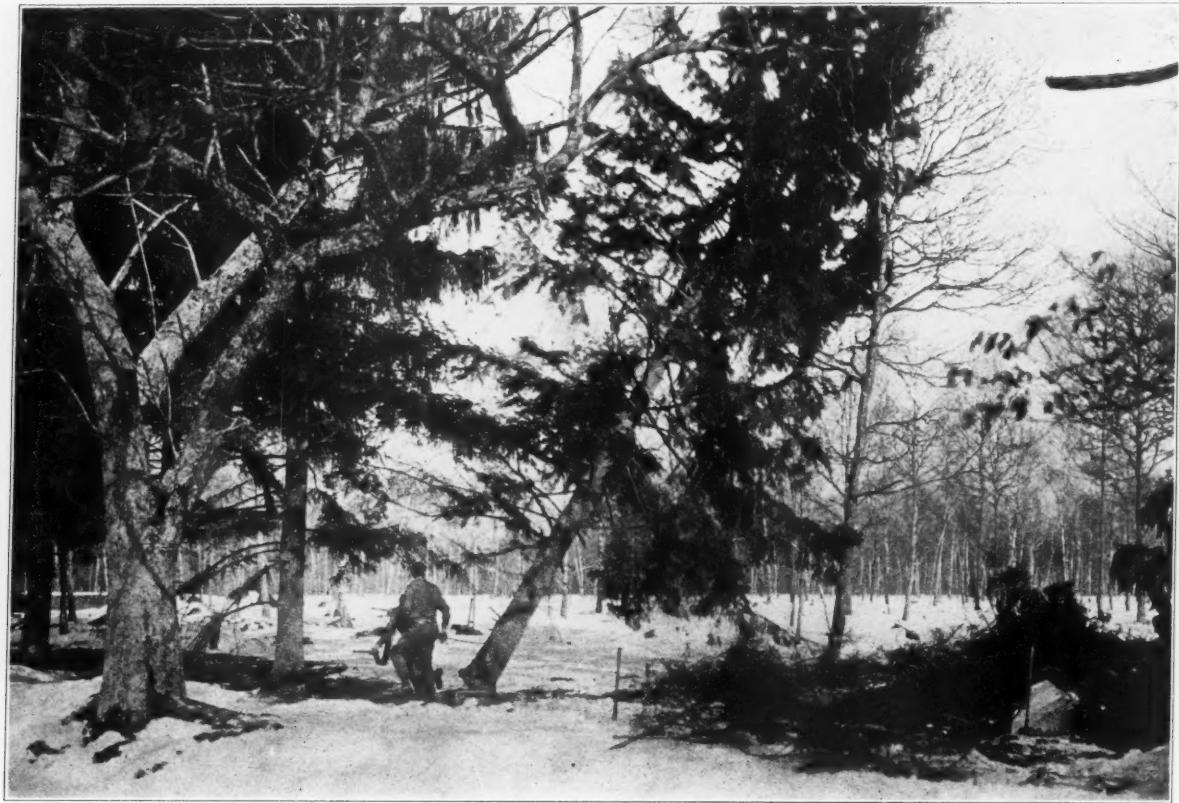
20th ENGINEERS IN FRANCE HAULING A SPRUCE TREE FULL LENGTH BY MEANS OF BIG WHEELS FROM WOODS TO MILL. OAK COPPISE AT THE SIDES OF THE ROAD.



OFFICERS OF THE 20th REGIMENT POSING FOR THEIR PHOTOGRAPHS AT A LUMBER CAMP IN FRANCE



THE AUREILHAN 20-M AMERICAN SAWMILL NEAR PONTENX, LANDES, FRANCE, SHOWING THE SYSTEM OF TRACKS UPON WHICH THE TIMBER AND LUMBER ARE REMOVED FROM THE MILL TO BE LOADED DIRECT TO THE BROAD GAUGE RAILWAY CARS



AMERICAN FORESTRY TROOPS CUTTING SPRUCE TREES IN A PARK IN FRANCE



A LOADED AMERICAN LOG WAGON ON ITS WAY FROM THE FOREST IN FRANCE TO A 20th REGIMENT SAWMILL



HAULING LOGS BY HORSE POWER FROM THE WOODS TO ONE OF THE 20th REGIMENT SAWMILLS IN FRANCE



LUMBER YARD AT THE BOURICOS AMERICAN 20-M SAWMILL NEAR PONTENX, LANDES. MARITIME PINE FOREST SHADES THE CAMP IN THE BACKGROUND AT THE LEFT



20th ENGINEERS SAWING FELLED TREES INTO LOGS IN A PINE FOREST, SOUTHERN FRANCE



20th ENGINEERS LOADING FIR LOGS ON NARROW GAUGE RAILWAY CAR IN THE MOUNTAINS OF EASTERN FRANCE



AMERICAN LUMBERJACKS AND FORESTERS LOADING LOGS ON TO AMERICAN LOG WAGON IN CENTRAL FRANCE



20th ENGINEERS LOADING LONG PILING FOR SHIPMENT FROM EASTERN FRANCE TO BASE PORTS ON ATLANTIC COAST TO BE USED IN DOCK CONSTRUCTION



20th ENGINEERS SKIDDING AND PEELING POLES IN A FRENCH PINE FOREST IN SOUTHWESTERN FRANCE



LOADING FOREST PRODUCTS ON TO FRENCH RAILWAY CARS IN THE HARDWOOD FORESTS OF CENTRAL FRANCE



A 20th REGIMENT SAWMILL UNIT CAMPED IN A HARDWOOD FOREST IN CENTRAL FRANCE



LOG BOOM IN AUREILHAN LAKE IN THE LANDES, FRANCE. THE AMERICAN SAWMILL LOCATED AT THIS POINT MADE AN UNUSUALLY GOOD RECORD IN PRODUCTION AND SHIPMENT



BRINGING SPRUCE AND PINE LOGS INTO AMERICAN MILL IN FRANCE. LARGE HEAP OF SAWDUST RIGHT CENTER. SAWDUST SEEN COMING FROM THE BLOWER PIPE.



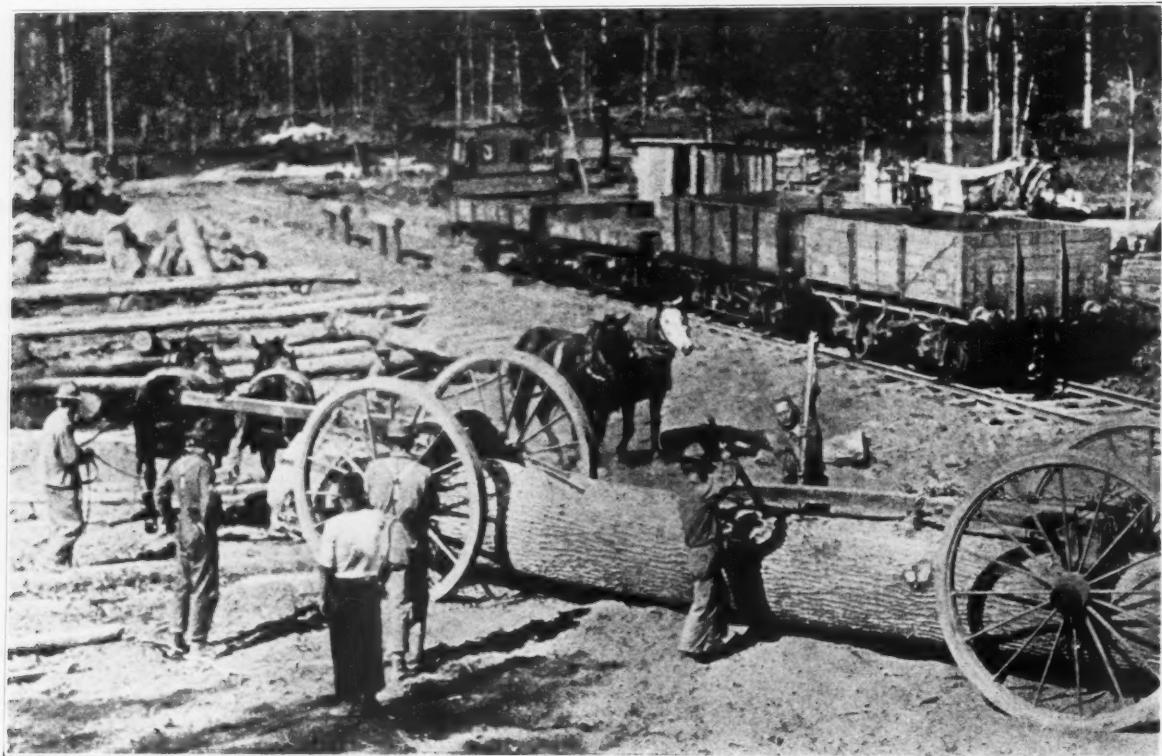
A LARGE LOAD OF MARITIME PINE LOGS ON A MOTOR TRUCK OF THE 20th ENGINEERS (FORESTRY) IN FRANCE



20th ENGINEERS LOADING LUMBER AND TIES ON FRENCH CARS. THE CAR AT THE LEFT IS LOADED WITH BARBED WIRE STAKES. THE BUILDING AT THE END OF THE RIGHT-HAND CAR CORRESPONDS TO AN AMERICAN CABOOSE.



TYPE OF WAGON USED BY THE AMERICAN FORESTRY ENGINEERS IN FRANCE. NOTE THE SIZE OF THE LOAD



TWO PAIR OF BIG WHEELS USED TO BRING A LONG HARDWOOD LOG TO A MILL IN CENTRAL FRANCE



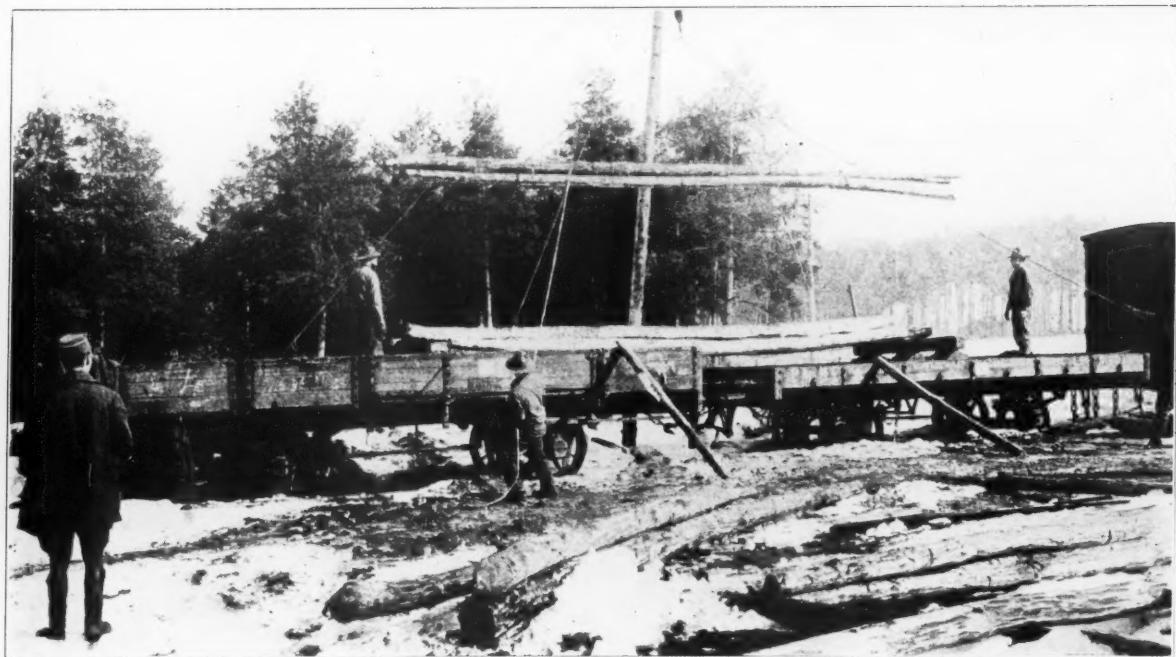
A LARGE SAWMILL OF THE 20th ENGINEERS CUTTING HARDWOOD LOGS IN FRANCE



LOADING SOME OF THE MANY THOUSANDS OF TIES MADE BY THE 20th REGIMENT MILLS FOR THE A. E. F. OPERATIONS IN FRANCE



A LARGE AMERICAN SAWMILL IN A FRENCH HARDWOOD FOREST



LOADING PEELED POLES ON TO RAILWAY CARS AT ONE OF THE OPERATIONS OF THE 20th ENGINEERS



THESE YOUNG LUMBERJACKS ARE THE TYPE OF SKILLED, ENERGETIC WORKERS WHO MADE RECORD PRODUCTION POSSIBLE



20th ENGINEERS LOADING FIR LOGS IN THE MOUNTAINS OF EASTERN FRANCE



UNLOADING SMALL LOGS AT AN AMEX MILL IN CENTRAL FRANCE. NOTE THE SPOUT THROUGH WHICH THE SAWDUST IS BLOWN TO LARGE SAWDUST PILE AT THE LEFT



MEMBERS OF THE 20th ENGINEERS LOADING PILING ON TRUCKS AT LANDING No. 2 IN FRANCE. THESE PILINGS ARE APPROXIMATELY SEVENTY FEET LONG



THIS WAS ERECTED BY THE 20th ENGINEERS NEAR ST. DIZIER AND SURPRISED THE FRENCH WITH ITS LARGE DAILY PRODUCTION, AS IN FACT DID ALL THE OTHER MILLS

HOW THE AMERICAN ARMY GOT ITS WOOD

BY PERCIVAL SHELDON RIDSDALE

EDITOR OF AMERICAN FORESTRY MAGAZINE

"**Y**OUR part in winning the war has been as important as that of any other troops in the American Expeditionary Forces."

This was the high commendation given right after the signing of the armistice to the foresters and lumbermen who had gone to France to get out the lumber needed by the American Army. It was contained in a general order issued by Col. J. A. Woodruff, "To the Officers and Soldiers of the 20th Engineers and Attached Service Troops." Colonel Woodruff was placed in command of the 10th Engineers (Forestry) when that regiment was organized shortly after the United States entered the war; and later of the combined Tenth and Twentieth, Foresters and Lumbermen, when they were united into what constituted the largest regiment the world has ever seen. Its total strength just before hostilities ceased was 360 officers and 18,183 enlisted men, an aggregate of 18,543 men engaged in the production of lumber for the American Army.

General Pershing had scarcely landed in France before he realized that great quantities of lumber were necessary for the army which was preparing to follow. The shortage of shipping at that time due to the submarine campaign made it impossible to ship the lumber from this country. Fortunately, France had the timber, although she did not have the men who could cut it for any forces other than her own. Accordingly, General Pershing sent an urgent cable to the War Department calling for lumberjacks and foresters to constitute a force of trained men who could get out an immense monthly supply. He said in effect that it would be useless to send fighting men unless they could be supplied with lumber and that forestry troops should be sent first. Docks, warehouses and railroads had to be built, and wood was needed for a hundred other purposes.

The War Department, therefore requested the Forest Service to assist in the formation of a forest regiment. This was the beginning of the 10th Engineers, composed

of two battalions of three companies each, which it was thought at first would be sufficient for the purpose. Plans for the organization of this regiment began in the early summer of 1917, shortly after the United States entered the war. Trained foresters and lumbermen were gathered from all parts of the country. Through its district representatives, the Forest Service was able to reach the operators and the lumber companies, the sawmill owners and the loggers, who had men skilled in all branches of the profession. Graduates and students of the forestry schools enlisted. These men came to the American University Camp which was established at Washington, District of Columbia, in the midsummer of 1917; and in the beginning of September were on their way to the other side. They arrived in France in the early days of October, and were all at their assignments by the first of November.

In the meantime plans for sending over a much larger army than had been anticipated and for shipping the troops with the greatest possible speed, necessitated the formation of another forest regiment. This was the 20th Engineers, the first two battalions of which were ready to proceed to France early in November, while the others kept following as fast as they were organized until March, 1918. Another regiment was being formed



LIEUT. COL. GRAVES IN FRANCE

The Chief Forester of the United States went abroad shortly after this country entered the war to organize the work the American foresters were to do in helping to get out the timber needed for war purposes.

at the time Germany quit. The 20th Engineers was commanded by Col. W. A. Mitchell, like Colonel Woodruff, a regular army officer and a West Point graduate, whose previous services fitted him admirably for this work. Colonel Mitchell later was transferred to the 2d Engineers, known at the front as the "Fighting Engineers," and was cited for bravery. When the 10th Engineers and the 20th Engineers were combined into one regiment, Colonel Woodruff took command of the united force.

The American foresters and lumbermen knew that they had their work cut out for them when they arrived in France, but they were impatient to get on the job. Originally it was figured that they would have to get

out about 25,000,000 feet of material a month; but these figures kept mounting until in September, 1918, they turned out 42,000,000 board feet, while for the six months ending with March, 1919, in preparation for the big spring drive which would have started then if the war had not ended when it did, the schedule called for a stupendous total of 450,000,000 feet of lumber for the American Army.

When the 10th Engineers was formed it was the first time a United States army had organized and equipped troops for systematic forest engineering. Immediately after the need became known, Henry S. Graves, Chief Forester of the United States, with the rank of major in the Reserve Engineer Corps, went to France to prepare for the forestry work there and to make arrangements for the acquisition of cutting rights in the French forests. Later Major Graves was commissioned a lieutenant colonel. With him went Capt. (later Major) Barrington Moore. They landed in France in June, 1917; and before Colonel Graves left France in January, 1918, the 10th Regiment and a considerable

portion of the 20th Regiment also had arrived and were producing wood and lumber for the American Army.

Two months after Colonel Graves reached France he was followed by Wm. B. Greeley, Assistant Forester, United States Forest Service, who had been commissioned a major on the regimental staff of the 10th Engineers in this country, but who was needed to take charge of organization work in France. Later he was promoted to the rank of lieutenant colonel and made chief of the entire forestry section under Colonel Woodruff, and in April, 1919, was decorated by the French with the Legion of Honor. Colonel Greeley was accompanied by two officers, First Lieutenants Stanley L. Wolfe and Clarence E. Dunston, and nine civilians, all of whom later were commissioned. These men were Theodore S. Woolsey, Jr., Donald Bruce, Swift Berry, R. Clifford Hall, Ralph C. Staebner, Fred B. Agee, William H. Gibbons,

Joseph Kittredge and W. H. Gallagher.

Major Woolsey, who was in April, 1919, made a lieutenant colonel, became a member of the executive com-



COL. W. A. MITCHELL, U. S. A.

First Commander of the 20th Engineers, who, upon his arrival in France, was transferred to the 2nd Engineers.



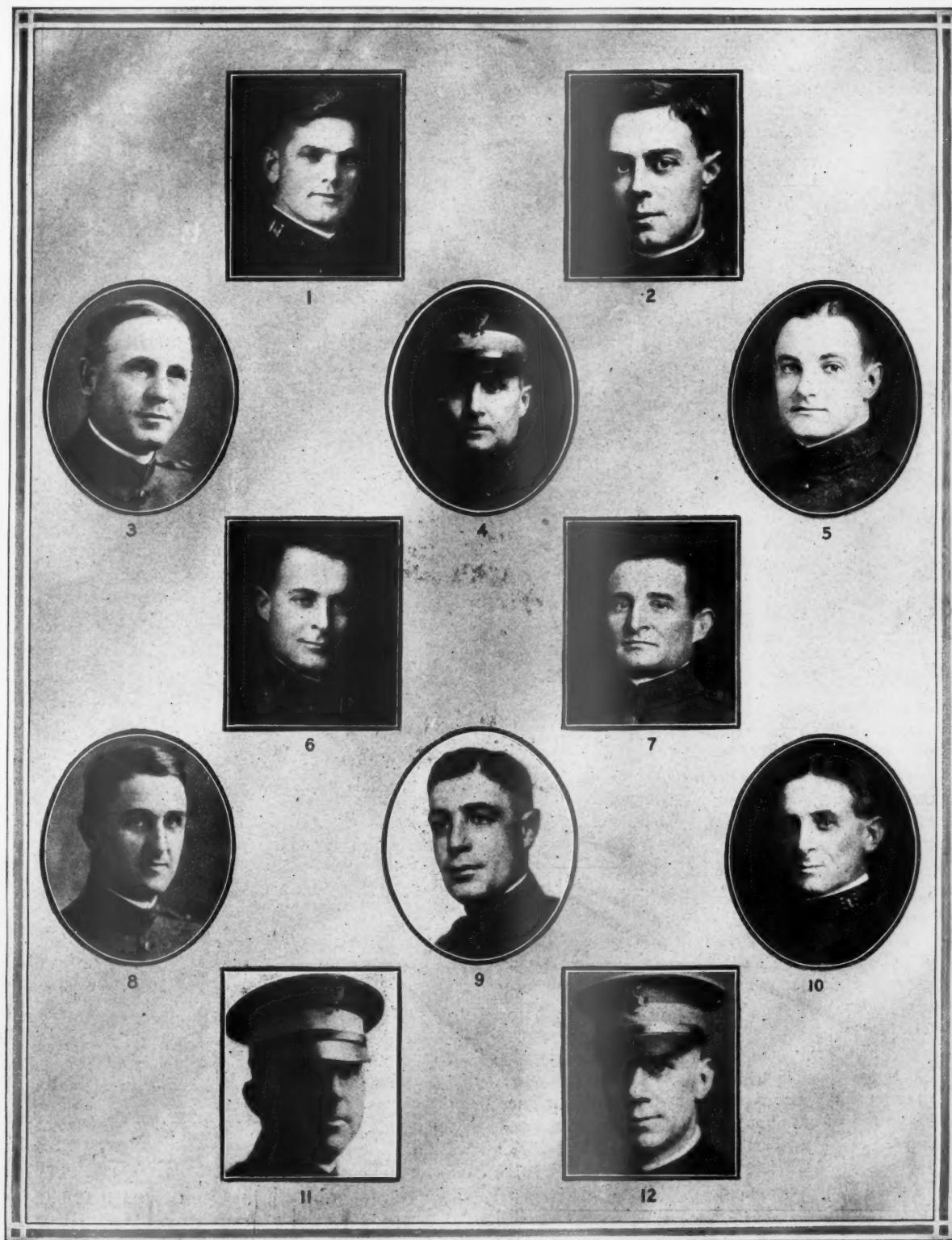
MAJOR S. O. JOHNSON
20th Engineers



MAJOR JAMES E. LONG
20th Engineers



THE LATE MAJOR E. E. HARTWICK
20th Engineers

*Photograph by Harris and Ewing*

AMERICAN FORESTRY'S PORTRAIT GALLERY OF OFFICERS OF THE TWENTIETH ENGINEERS (FORESTRY)

1. 1st Lt. Paul D. Mackie. 2. 1st Lt. Lester W. Jacobs. 3. Major Collin E. Clark. 4. Capt. F. R. Barnes. 5. Capt. Ralph H. Faulkner.
6. Capt. George G. Steel. 7. 1st Lt. Milton Pittman. 8. 2nd Lt. Harry G. Miller. 9. 1st Lt. Frederick B. Judge. 10. 1st Lt. Gilbert C. Eastman.
11. 2nd Lt. Fred A. Roemer. 12. 2nd Lt. Julius A. Herbst.

mittee of the Comite Interallie de Bois de Guerre, which was organized before Colonel Graves returned from France to avoid competition among the British, French and American armies in the purchase of timberland. Captain Bruce and Captain Kittredge served under Lieutenant Colonel Peck in the fuelwood project in the advance section. Capt. R. Clifford Hall served under



MAJOR P. E. HINKLEY
Commanding 10th Battalion, 20th Engineers

20th Regiments any special training in forestry or lumbering methods before they left the United States, for they were picked men, chosen because of their proficiency in their special work, while the clerical force was selected because of their actual knowledge of keeping lumber accounts and similar information. So during their stay at American University Camp the men were given what military drill was required for administrative and disciplinary purposes. Colonel Graves reports one of the men to have remarked after they got to the other side: "We're not much on drill, but we're hell on cutting down trees." After they landed in France a large part of their actual military equipment was left behind at the various supply stations. As a rule they took with them to their camps about one-tenth of their guns.

The 1st and 2d Battalions of the 20th Engineers, under command of Major Hartwick, of Detroit, and Major S. O. Johnson, of California, sailed in December, 1917; the 3d and 4th, under command of Major R. A. Johnson, California, and Major George H. Kelly, Oregon, sailed the first week in January, 1918; and the other battalions followed at approximately three-week intervals, with Major Frederick Kellogg, New York, in command of the 5th; Major Benjamin F. Wade, of New Jersey, the 6th; Major C. E. Clark, of North Carolina, the 7th; Major George W. Weisel, of Montana, the 8th; Major

Major Woolsey, and the other men named also held important posts.

It was not necessary to give the men of the 10th and



MAJOR F. M. BARTELME
Commanding 14th Battalion, 20th Engineers

F. R. Barnes, of Missouri, the 9th; and Major P. E. Hinckley, of Maine, the 10th.

"We are here, and mighty darned glad that we are; we are busy as beavers, and are going to do our bit and then some in this war." This is what Capt. John D. Guthrie, of the 20th Regiment, Engineers, wrote home shortly after his arrival in France.

That was the spirit which pervaded the entire regiment of foresters and lumbermen. Their only complaint was that they could not get into the actual fighting. Every one of the more than 18,000 who were in the regiment at the time the armistice was signed had been anxious to get to the front. Any one of them would have jumped at the chance any time it had been offered. Some of them came very near getting there shortly after the big spring drive of the Germans began in 1918. Plans were on foot to mobilize every available man in the Service of Supply for service at the front, but the crisis passed without making this action necessary.

The fact, however, that they did not get into the active military end of the game does not detract in the least from the invaluable service they rendered. In the highest sense it was of the greatest military importance, for the army could not have moved forward or maintained



COL. H. L. BOWLBY
Former Regimental Adjutant, 20th Engineers

itself without the endless streams of lumber which were turned out. It is almost impossible to exaggerate the value of wood supplies as a factor in military operations.

In the general order which he issued after the signing of the armistice, Col. Woodruff, after declaring that the army at that time was "well supplied with lumber," added:

"When ties were called for in large quantities to support the advances of our troops at St. Mihiel and in the Argonne, they were ready. At practically every dock project, deliveries of piling and lumber were well ahead

of the construction. In other words, the Forestry Troops have made good on the work for which they were brought to France."

When these men left for France their friends knew they would make good. With what a vengeance they would fulfill these expectations and what remarkable records they would make in spite of countless and constant handicaps, could hardly have been dreamed of in advance. But these stalwart sons of America, hardy woodsmen and sturdy sawmill operators, went into the fight with the same grim determination that inspired their fellows at Belleau Wood and Chateau Thierry, at St. Mihiel and in the Argonne. They wanted to go to the front but could not. But they failed in no task that was assigned to them; in fact, they did more than was asked of them and smashed record after record in their keen rivalry to help crush armed autocracy. They put up a winning fight which will stand among the brilliant achievements of the war on the pages of history.

Both with the French mills, old-fashioned and man-driven, which they were compelled to operate when they first arrived, and to some extent even up to the end, and with the modern American mills which arrived later, the lumbermen began from the day of their first cutting to hang up one record after another with patriotic regularity. Mills which were rated at 10,000-foot capacity in a ten-hour day were sent throbbing ahead full speed and made to turn out 25,000 and 30,000 feet a day, with shifts working night and day in most instances. One 20,000-foot mill made the



MAJOR E. H. MARKS

high-water mark of the war when the 27th Company in 23 hours and 35 minutes cut 177,486 feet of lumber.

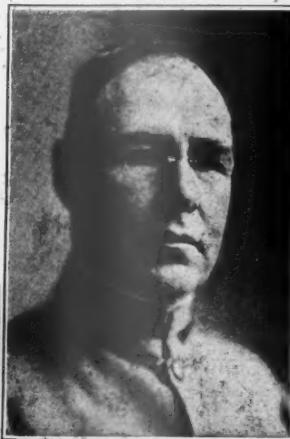
The incident—if such it should be called—might be related of how on one occasion a 10,000-foot mill was moved a distance of twenty-five miles and in forty-seven hours from the time it stopped buzzing in its original

location was sawing logs in the new section of woodland. Five days had been allowed as a reasonable time for moving this mill. Such feats were not rare occurrences, and similar ingenuity and ability to meet emergencies were shown by the forest regiment many times during its stay in France.

These men had gone over to France for a purpose and they were not to be stopped by difficulties and obstacles. If they did not find the facilities which they needed at hand, they turned in and manufactured them from whatever material was available. In the early days particularly they had to



MAJOR A. W. CORKINS



MAJOR B. F. WADE

resort to all sorts of ingenious expedients. There was urgent need of supplies for the American army, which was beginning to pour over rapidly. The men of the forest regiment knew this, and they were not going to allow their "buddies" in the infantry and artillery to suffer for lack of barracks and warehouses and hospitals, if there was any way under God's heaven to prevent it. And so American ingenuity was put to the test, and it came out on top. If horses had not yet arrived, the men formed themselves into teams and dragged out the logs by man-power. If the horses arrived before their harness, pieces of burlap and bagging, rope and nails were "composed" into some of the most picturesque harness the world had ever seen. It is probable that the horses themselves had many a chuckle over some of the ludicrous outfits to which they were fitted. Of course, they were too polite to do this before the men, but when they were in their stalls for the night they must have laughed heartily, and probably have carried on a conversation which would have given Kipling fine material for a new animal story.

The officers and men of the forest troops had to improvise in many ways, even to language. Here is what Sergeant Oliver M. Porter, Yale Forest School '15, who was out buying cordwood supplies for the A. E. F., wrote back to the States on that subject. He says: "I hardly know my mother tongue. Speech with me has become an unrecognizable mixture of English, French and Span-



LT. COL. C. S. CHAPMAN

ish, since I have to deal with American soldiers, French civilians and Spanish contract labor. Also I am learning how to talk with my hands, arms, shoulders and feet. Actions speak louder than words, especially where you don't know the words."

Another handicap which the Americans had to overcome was that, being the last on the ground, they had the longest hauls to make. The English forest regiments operated in a comparatively small semi-circle up in the northern part of France; the French in a somewhat wider arc back of this, with Paris as the center; but the Americans had to swing around on a much longer circumference, reaching from the ports of Brest, St. Nazaire and Bordeaux on over through the central southern part of France and up into the Vosges and Argonne section. This called for the building of many miles of railroad, at the Eclaron plant alone, for instance, eight miles of standard gauge and twenty-five miles of two-foot gauge railroad being constructed. The wood cutting did not cease with the signing of the armistice; and up to February 1, 1919, the forest regiment had to its credit 205,000,000 feet of sawed lumber; 2,998,000

standard gauge and 941,000 narrow gauge ties; 1,746,378 pieces of round products; 39,595 pieces of piling and 319,057 cords of fuelwood.

Some of the mills were close to the front, others hundreds of miles away. The mill at Ancemont, to mention one of a number, was operating at the time that town was bombarded; and this mill, which was four or five miles back from the line, was moved to Ippécourt, in the Argonne section. Among other mills close to the front were those at Menil and at La Tour.

One month after the first forestry troops had reached their assignments in France they had three mills in operation, two of them French and one American. This was on December 1, 1917. The first American mill had begun operations on November 27 at Mortumier, near

Gien. By the first of January the Americans had ten mills in operation; a month later, twenty-one; by March 1, thirty-four; and so on in increasing numbers until at the time of the signing of the armistice there were eighty-one mills buzzing away in various parts of France, with a dozen more in process of completion. If the war had continued, it would have been necessary for the American foresters and lumbermen to have gone into some of the rougher mountain territory, where more difficult lumbering operations would have met them, including construction of railroads over steep grades and rocky passes. The engineers were preparing to meet these problems.

France was divided into districts to facilitate the handling of the forestry work, the number of districts being increased from time to time until there were eventually fourteen, one for each battalion, with headquarters at the following places: Dax, Major Brookings commanding; Epinal, Major S. O. Johnson; Dijon, Major Sanborn; Mimizan, Captain Phipps; Gien, Captain Lynch; Lapit, Major Kellogg; Chateouroux, Captain Maas; Bauge, Captain Vail; Bourg, Major Barnes; Bourges, Major Hinkley; Pontenx, Major Lafon; Besancon, Major Kelley; Eclaron, Major Spencer, and Le Puy (the birthplace of Lafayette), Major Bartelme.

No finer body of men ever went from America than the foresters and lumbermen of the 20th Engineers. The highest tribute that can be paid to them is this: They did all that was expected of them—and more. The work which they did, the toil and the struggle in rain and mud, through long hours of the day and night, to get the timber out of the forests and through the mill; with no opportunity for decoration or military reward for service gallantly performed; fighting against obstacles which tried men's souls and made them "turn gray"—all this makes the members of America's great forest and lumber regiment worthy of a glowing page in the history of the world war for



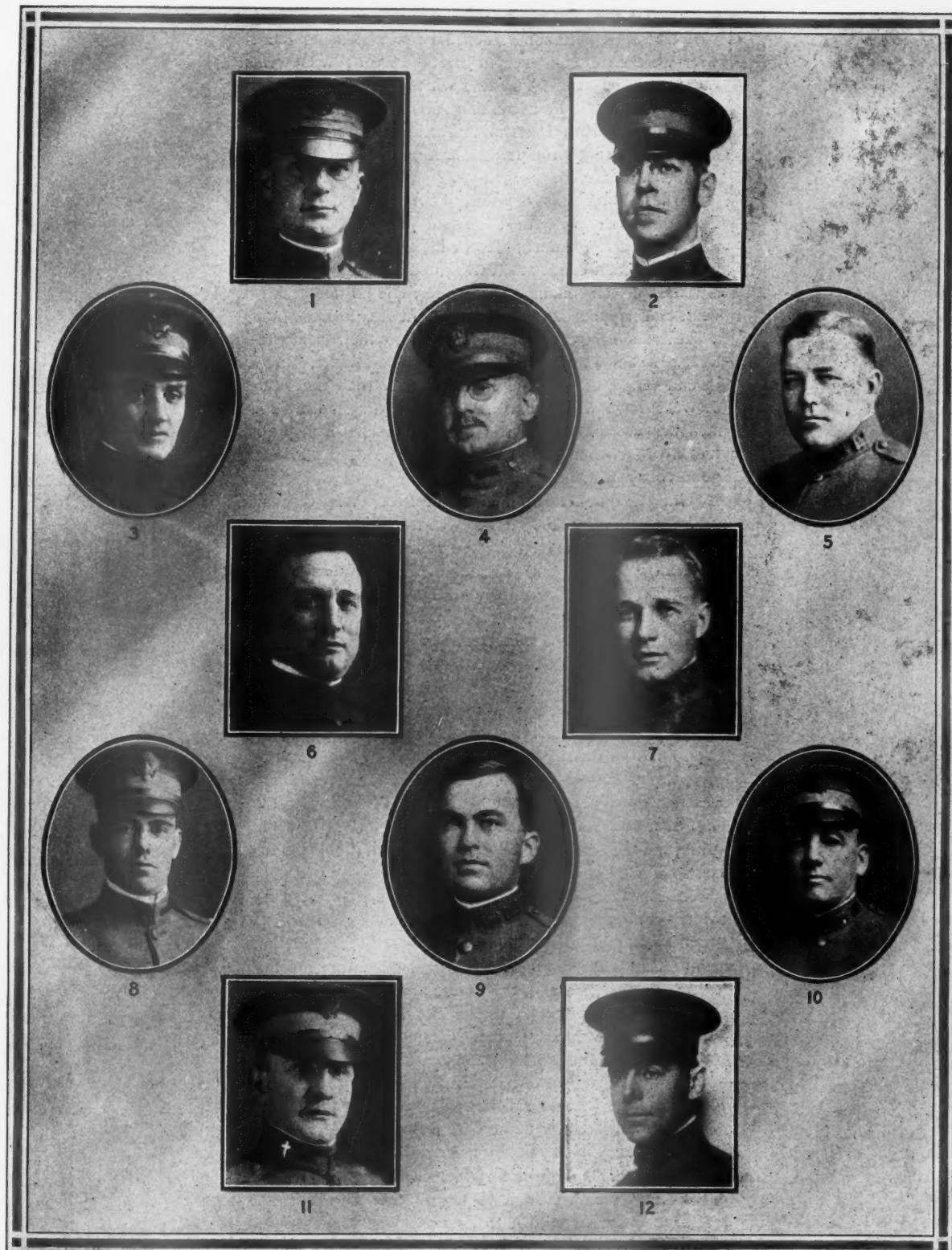
CAPTAIN HOWARD Y. WILLIAMS

Chaplain of the 20th Engineers (Forestry) and doing yeoman work for God and country in France.



CAPT. H. R. CONDON

Headquarters, 11th Battalion, 20th Engineers

*Photograph by Harris and Ewing*

AMERICAN FORESTRY'S PORTRAIT GALLERY OF OFFICERS OF THE TWENTIETH ENGINEERS (FORESTRY)

1. 1st Lt. W. G. Conklin. 2. Capt. Frederick C. Moore. 3. 1st Lt. Frank Mizell. 4. 1st Lt. R. H. Rowdybush. 5. 2nd Lt. Luther B. McDaniel.
6. Capt. F. R. Weisel. 7. Capt. J. H. Price. 8. 1st Lt. Alfred D. Kettenbach. 9. 2nd Lt. Charles J. Davis. 10. Major George H. Kelly. 11. 1st
Lt. Cornelius W. Smith, former Chaplain, 20th Regt. 12. Major William C. Moore.

AMERICAN FORESTRY



CAPT. JOHN B. WOODS



FIRST LT. RISDEN T. ALLEN



FIRST LT. ROBERT L. DEERING

civilization. All but a few of the men who enlisted in the various forest battalions reached France. Among those who were destined never to arrive were 91 who went down on the ill-fated *Tuscania* when she was torpedoed off the Irish coast by a German submarine. Aboard this vessel was the 6th Battalion. Excellent discipline prevailed, however; prompt assistance came and most of the men were saved.

In describing this disaster, Thomas P. Reid, Yale Forest School, '13, wrote: "I had just finished supper and was back on deck, life belt on and all prepared, when the crash came. A tearing and a heavy thud, followed by a tremendous fall of water, left no doubt as to what had happened. An instant of silence, darkness and a great shouting as the fellows ran to their boat stations. Boats were lowered, some in good order, others in bad shape, and as one end fell faster than the other or went down with a crash, capsized and spilled all the men who were in it." After telling how eleven men got into a broken boat by jumping from the deck above, a good thirty feet, he adds:

"One of our fellows became chilled. We were all pretty wet, but not too cold to whistle, or chew tobacco, and even smoke cigarettes. We rubbed the chilled one, pounded, stood him on his feet, and 'cussed' him to make him 'hot,' and succeeded, for when a trawler finally picked us up about midnight, he was in pretty fair shape.

"Six hours later we were landed, 500 of us, somewhere in Ireland, where nothing was too good for us. Seemed like the whole town just spread themselves; tobacco, clothes, food, candy, money was almost forced upon us all. There were entertainments by the Naval Base Red Cross, and so forth. There will always be the warmest of spots in our hearts for the people there. Withal it was really wonderful how so many were taken from the ship in almost perfect order."

Major Wade, in command of the 6th Battalion, was the last soldier to leave the sinking *Tuscania*.

While none of the other members of the forest regiment were compelled to go through an experience as grueling as that which befell those aboard the *Tuscania*, nevertheless there was excitement and adventure aplenty almost from the moment the various battalions entrained at American University Camp, ready for the long journey, right through to the end. There were new experiences to satisfy the most venturesome. The story of the trip across of the two battalions composing the 10th Regiment, the first to sail, may be taken as typical of similar experiences by those who followed. Here is the interesting account of that journey as related by Major David T. Mason, professor of forestry in the University of California, who helped to organize this first forest regiment and went with it to France. They sailed from New York on the Cunard liner, *Carpathia*, leaving there September 10. Major Mason continues:

"There were the usual scenes at the port of embarkation; a ferry boat carried the regiment from the Pennsylvania terminal to the pier where the *Carpathia* lay. For many of the men this was the first glimpse of New



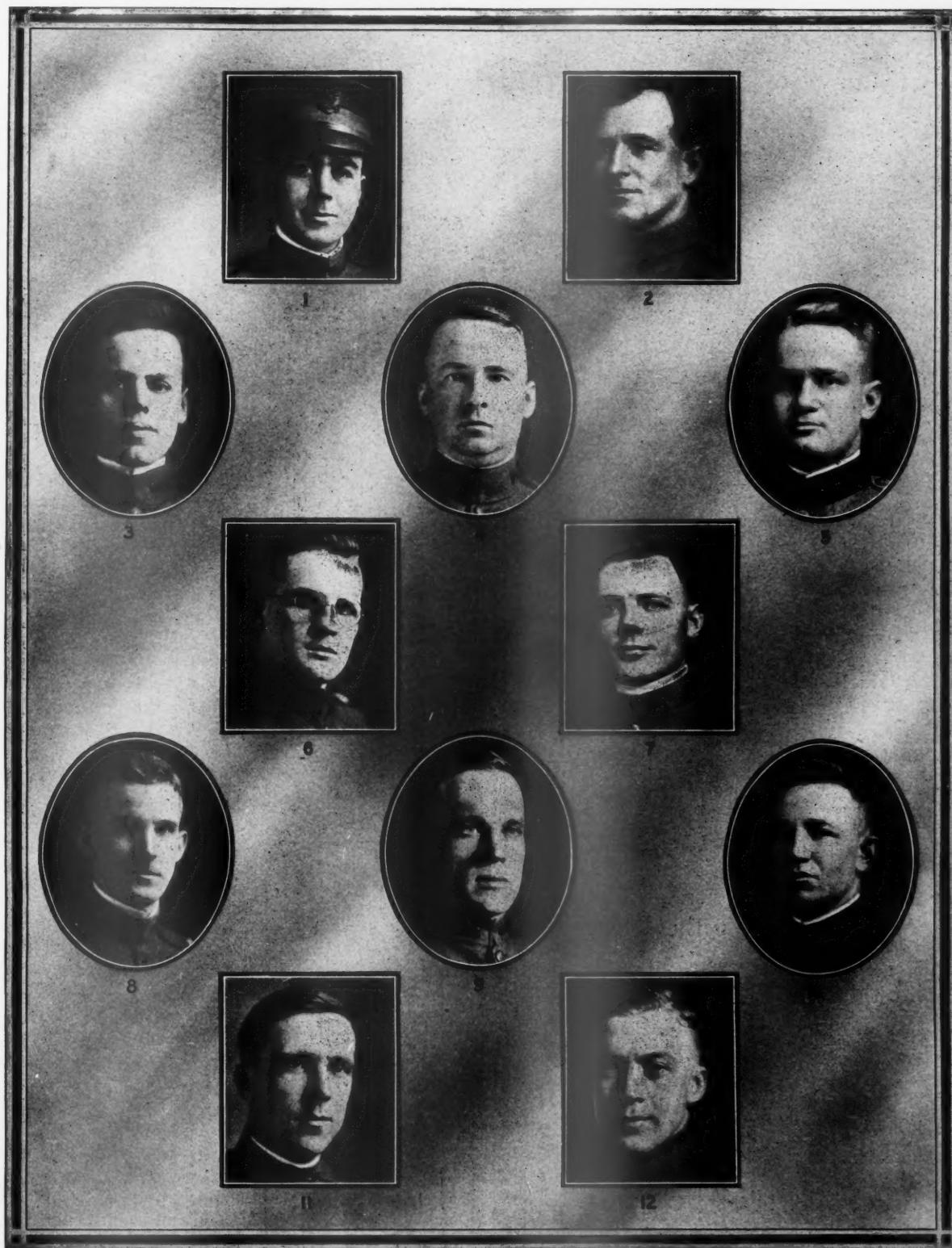
SECOND LT. JOHN W. SELTZER



CAPTAIN DORR SKEELS



2nd LT. STANLEY H. HODGMAN



Photograph by Harris and Ewing

AMERICAN FORESTRY'S PORTRAIT GALLERY OF OFFICERS OF THE TWENTIETH ENGINEERS (FORESTRY)

1. 1st Lt. William A. Foster.
2. 1st Lt. Clement C. Abbott.
3. 1st Lt. E. B. Hamilton.
4. Capt. Earle P. Dudley.
5. 1st Lt. Fayette L. Thompson.
6. 1st Lt. Leroy A. Schall.
7. 1st Lt. Fred A. Stone.
8. 1st Lt. Robert B. Hill.
9. Capt. John Summerset.
10. 1st Lt. R. N. Benjamin.
11. 1st Lt. Charles P. Hattrick.
12. 1st Lt. Albert L. Shellworth.

York, and it was a brief one, for sentries at the head of the pier prevented any visiting ashore. Less than a half dozen friends of members of the regiment were on hand to wave "goodbye." The decks had been alive with men all day, but as the ship backed out into the stream, everyone was ordered out of sight, and she steamed down the harbor apparently an ordinary freighter. Farewells were waved to the Statue of Liberty outlined against the last glow of the sunset sky.

"A two-day run brought the Carpathia into the beautiful land-locked harbor of Halifax, where there was a nine-day wait for the assembling of the convoy. These were impatient days, for all wanted to be on the way. Although the men were not allowed shore leave, it was permitted to lower the ship's boats and to row around the inner harbor; the principal interest of these days was in the boat races organized between the companies of the 10th and with the boats from other ships. Finally the convoy was ready, and on September 21, thirteen merchant ships, some of them transporting American, Australian and Canadian troops, wound slowly through the narrows and down the outer harbor past ships of the British Navy. There was no hiding below this time; all were on deck to send back cheers in return for the fine music and cheers from the navy. At dusk the convoy passed in single file through

the submarine net guarding the harbor. As night came on the regular convoy formation in three columns was taken. We found ourselves under the escort of a cruiser so fantastically camouflaged that she was promptly nicknamed the 'scrambled egg.'

"There was a certain grimness in the arrangements on the Carpathia which gave a not wholly unpleasant indication of the possibility of adventures ahead. Small boats were swung out over the side ready to be hastily launched. Piles of life rafts encumbered the decks. Life preservers were much in evidence, especially after the danger zone was reached. The ship followed a zigzag of courses, changed every few minutes. Everything was dark at night; even smoking on deck was prohibited. There were the frequent station drills, when at the warn-

ing from the siren, every one in his life preserver moved quietly but rapidly to his station for abandoning ship; at first it took twelve to fifteen minutes from the time the alarm was given for all to reach their stations, but later careful training reduced this time to about five minutes. There was a thrill one thick, stormy night when the alarm sounded; in the fog, the 'scrambled egg' had nearly rammed the Carpathia. A small storm which

lasted for two days sent a good many to their bunks; later in censoring letters, those of us who had the censoring to do were amazed to find some such remarks as this in almost every letter: 'It was a great storm; everybody was sick but me. Ha! ha!' The decks were filled nearly all day with the different companies up in turn for their physical drill. One afternoon everyone was delighted when the group of ten specks that climbed 'over the hill' to the southeast drew nearer and turned out to be our destroyer escort to take us through the 'danger zone.' The destroyers spread out in a ring around the convoy and darted back and forth in a very businesslike manner. We realized then that there had been a little tension and that it was good to have the destroyers for company.

"After two days in the danger zone the convoy divided. Part went into Liverpool; the Carpathia, with several other ships,

headed for Glasgow. In the early morning of October 2 the hills of Scotland were first sighted. The destroyers turned back as the mine fields at the mouth of the Firth of Clyde were entered. A little later the convoy passed through the gate in the submarine nets at Greenock, and there waited for the tide before going on up the river. The sail up the Clyde is a vivid memory. There were glimpses of "tank"-manufacturing plants, of famous German submarines captured and brought to port. The river, lined for miles on both sides with ship-building plants, is so narrow that the new ships have to be launched at an angle to prevent their striking the opposite bank. Steaming slowly up the river, we were heartily cheered by the thousands of shipworkers along the shores. They were near enough to see the expres-



MAJ. DAVID T. MASON

sions on their faces; they were evidently delighted to see the first American troops to arrive in Scotland, and we were at least equally glad to see the Scotch. It was especially interesting to note the great number of buxom Scotch girls in smocks, breeches and puttees working on ship construction.

"After a few hours of well-ordered hustle in getting off the troops and baggage, the regiment entrained for a destination to us unknown. Fifteen hours on the train brought us to Southampton, England, where a few days were spent in a so-called "rest camp" awaiting transportation across the channel. No one seemed to know just why the word "rest" was used in connection with such a camp, for it was anything but restful. The line of march from the city out to this camp was along a splendid avenue beneath an arch of magnificent elms. The avenue, strange to say, had been constructed in other days by other soldiers waiting to take ship from Southampton—British soldiers waiting to embark for the Atlantic voyage in the days of the American Revolution. Few of us had ever been in Europe before, so that there was keen interest in investigating the old parts of the city—the remains of the old walls, the old inns like pages from Thackeray, the monument on the waterfront to commemorate the sailing of the Mayflower in 1620. A brief glance at beautiful England, and we crowded aboard a shallow draught side-wheel boat to be whisked across the English Channel to La Havre during the night."

While the various battalions and even some of the companies were broken up when they reached France and scattered in widely different parts of the country, from the rich maritime pine section of the southwest up through the central part and on to the Vosges and Aronne regions, their experiences in many respects were similar. Some of the incidents which befell the 10th Regiment along the way are picturesquely described by Major Mason, who says:

"France was reached on October 7, but there were still days of travel and waiting ahead before timber operations could begin. Fortunately, only a day was spent in the rest camp at La Havre, sheltered from the pelting rain in sheds paved with cobbles. Once more the regi-



CAPT. JOHN D. GUTHRIE

ment entrained with the destination unknown to us. The French troop train, now so well known to millions of Americans, was a curiosity to us. There were the usual "eighty-four" cars—little box cars plainly marked "eight horses lengthwise or forty men." It was hard to see how forty husky Americans, each carrying his full equipment, could crowd into one of the little cars, but it was done. There were rough benches in the cars, but no toilet facilities whatever. Thirty-six hours of slow running, which carried us around the outskirts of Paris and gave a glimpse of the palace at Versailles, finally brought us to Nevers, a small city in almost the exact center of France.

A tent camp was pitched in a well turfed field in the outskirts of Nevers. A few days of rain and the tramping of twelve

hundred odd pairs of feet soon stirred up a large mud pie bearing little resemblance to the original field. Here the regiment waited for two weeks for the arrival of motor and other equipment brought on the Carpathia. Looking back it now seems remarkable that so much of the equipment succeeded in crossing England, the Channel and half of France so quickly. In Nevers, we had our first experience in the French lumber business; about two thousand feet of lumber was needed for crating material, so a motor truck and a detail of men went out to find it; after the biggest local stock of lumber had been found, there was a long parley through an interpreter with the woman who managed the place; finally some green, rough white fir, grading about number two common, was found in three-fourths inch and one inch thicknesses; we paid at the rate of one hundred dollars per thousand feet board measure for the thinner stock and one hundred twenty dollars for the thicker.

"To meet the most pressing timber needs of the American Army, the regiment was split into five parts for work in different parts of France. Two and one-half companies were ordered to the pine forests along the coast in the southwest; two companies were to go into the fir forests of the Vosges Mountains in Eastern France; and a half company was to cut pine in Brittany near the coast in the northwest; and two other companies were to work in different parts of Central France.



HEADQUARTERS OF THE AMERICAN OPERATIONS IN THE VICINITY OF PONTENX, IN ONE OF THE GROUP OF SCHOOL BUILDINGS ON THE PONTENX VILLAGE GREEN, LANDES, FRANCE

As fast as equipment arrived it was divided between the different units; as soon as there was sufficient equipment on hand to permit work to begin, the units proceeded to their stations, which were reached just before November 1. Only a comparatively small part of the logging equipment and no complete sawmill units had accompanied the regiment on the Carpathia, so the first work was necessarily to be limited to that preparatory to sawmill operation and to that of producing timber in the round.

"The writer was assigned to the work of taking the motor train of the First Battalion across country from Nevers to Pontenx, a small village about sixty miles southwest of Bordeaux. The three days allowed gave just time enough to make the three hundred sixty mile run, for the heavy trucks could do only about twelve miles per hour, and lack of lights limited the running

time from six in the morning to five at night. It was a beautiful trip over finer roads than any of us had ever traveled before. The first two days of the trip led through a decidedly hilly country, with fine hardwood forests scattered about here and there. Most of the route followed the French national highways, which usually have a hard surface of water bound macadam about eighteen feet wide, on each side of which is smooth turf about ten feet wide for columns of marching men when need arises. The roads are almost everywhere lined by splendid trees which are made to swell the incomes of the communes which own them; chestnut, cherry and other

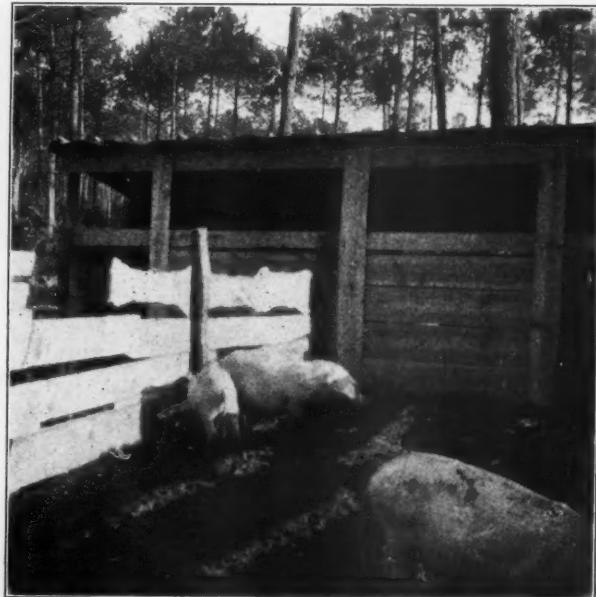


THESE LOADING CRANES WERE USED FOR TRANSFERRING THE LUMBER FROM NARROW GAUGE TO BROAD GAUGE CARS IN MANY OF THE SHIPPING YARDS OF THE 20th REGIMENT

fruit trees yield their annual crops, and finally their timber; in Southern France, cork oak trees furnish crops of bark every eight or ten years; Lombardy poplars, locust, sycamores and others are valuable mainly for their timber; all add greatly to the beauty of the highways. Along much of the route the French had seen no Americans before, and our welcome was the more hearty for that reason. The motor train reached Pontenx just before the arrival of the train loaded with troops, supplies and equipment."

A picture of the men in their camps, of the way in which preparations were made for their living and for the lumber operations which they were anxious to start as promptly as possible, is given by Major Mason, who says:

"The first day in the 'Landes,' as the pine forested region of Southwestern France is known, was an especially busy one. The railway cars had to be unloaded and released immediately and camp established in the pine forest four miles away. Fortunately, a bright,



20th REGIMENT TROOPS AT THE BELLEVUE CAMP IN FRANCE USED KITCHEN REFUSE TO FEED HOGS, RAISED THE HOGS AND AUGMENTED THEIR COMPANY FUNDS BY SELLING THEM



A LOAD OF PILING APPROXIMATELY 70 FEET LONG ON MOTOR TRUCK AND TRAILER GOING AROUND SHARP TURN IN THE ROAD IN A FRENCH SPRUCE FOREST. OPERATIONS OF 20th ENGINEERS

sunny day among a long series of rainy ones made it possible to get under cover without wetting men and supplies. The underbrush was cleared from the camp site, and trees felled to make room for the pyramidal tents. Kitchens were soon ready to serve hot meals to the long lines of hungry men. Bed sacks were filled with straw and for the first few nights were placed direct on the wet sand; water oozed up through that sand for days. As soon as possible lumber was obtained from nearby French mills to be used in flooring the tents and in building bunks. Sibley stoves installed in the tents improved conditions and men no longer had to go to bed right after supper to keep warm. Although there was plenty of wood handy on the camp site, it was all sappy and wet, and dried out very slowly during the winter. For fully two months it was necessary to buy dry wood for the kitchens. At this time dry pine wood was selling in Bordeaux at twenty-two dollars per cord; it was less expensive, of course, in the forest near Pontenx. Wells were dug through two or more layers of hard pan to get away from the surface water, and even the water so obtained was chlorinated before it was put in the filter bags, or 'Carrie Nation cows' as they were familiarly known, for the men to drink. Kitchen refuse was partly

burned in incinerators and partly fed to hogs. The hogs turned out to be an important source of profit to the company funds; young pigs weighing twenty to twenty-five pounds were bought from the natives for about twenty dollars per head, and after a few months' feeding until they had reached a weight of about two hundred pounds they were sold in the French markets at about seventy dollars per head.

"This camp at which American forestry operations began in the Landes was in a section of the country quite typical of the two and three-tenths million acres of pine forest which border the Atlantic and at places extend sixty miles or more inland in Southwestern France. Originally a worthless, sandy, marshy waste, it has been reclaimed by drainage and the planting of forests of maritime pine until now it is one of the richest portions of France. The region is now about eighty per cent forested with even-aged stands of trees of different ages up to sixty years in the different stands. The unforested area consists of small lakes and highly cultivated little farms scattered through the forest; the farmers work both on their farms and in the adjoining forests, thus furnishing a stable supply of labor for the forest work.

"Timber operations were started immediately by small crews, while other crews continued the work of settling camp. The first work was that of getting out piling, greatly needed for the construction of American docks

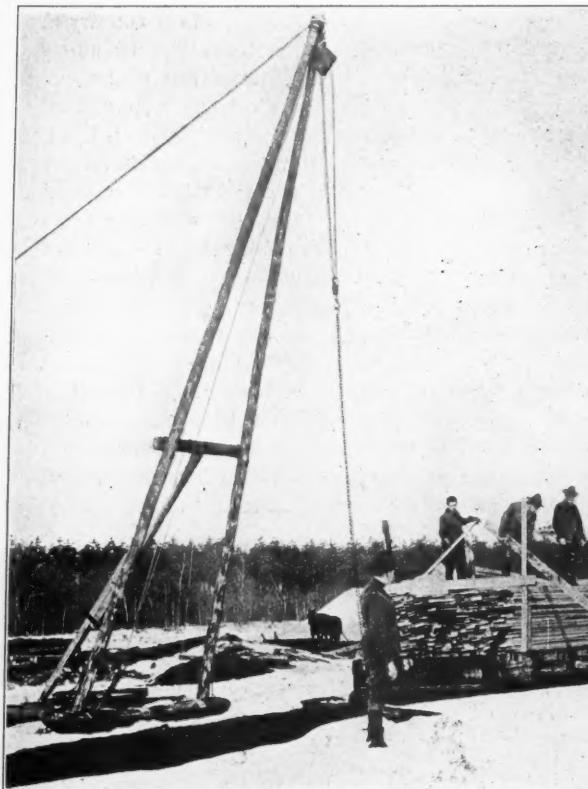


THE LUMBERJACKS AND FORESTERS HELPED TO BUILD TELEPHONE SYSTEM PLATFORMS IN FRANCE WHICH WERE LIKE FIRE LOOKOUT STATIONS IN OUR OWN FORESTS.

at the port of Bassens, near Bordeaux. There were sufficient tools to fell the trees, but only makeshift logging equipment to get the piling to the edge of the hard road. No horses had yet arrived. It was quite amusing to see a forty-foot piling, suspended beneath the axle connecting a pair of dump cart wheels, dragged through the woods by ten men on a rope ahead while ten more men with cant hooks helped along the sides. A drenching

it was a beginning. The production of fuel wood from limbs and tops and of barbed wire stakes from small trees was under way. At this stage of the operations, especially, it was difficult to secure railway cars in which to make shipments. Throughout the war, France was struggling with a car shortage partly caused by pre-war planning by the Germans, as immediately before August, 1914, Germans bought great quantities of raw materials of all sorts in France; the material was shipped to Germany in French cars, and the cars were held.

"The timber cut by the American troops was not bought by the American Army direct from the French timber owners. Timber acquisition procedure was somewhat as follows: An American officer assigned to forest acquisition work in a given region would look around for forest tracts suitable in character and accessibility for American operations. He would report the suitable tracts to the French officer having charge of forest work in the region. The French officer, after making sure that



THE SPEED WITH WHICH THE 20th ENGINEERS LOADED LUMBER TRAINS AMAZED THE FRENCH, AS DID MOST OF THE OPERATIONS OF THE REGIMENT

rain was falling, but the men paid little attention, for at last they were getting out timber. To move the piling to the railroad escort wagon, running gears were rigged up to carry the small ends while the butt ends were carried on F. W. D. motor trucks; three pieces were taken in each load. It was almost impossible to run the trucks slowly enough to be safe for the escort wagons, so when the horses arrived a few days later, a four-horse team and another escort wagon were substituted for the truck.

"Foundations were constructed so that the sawmills might be set up as quickly as possible when they arrived from America. Large quantities of logs were cut and decked ready for the mills. Telephone lines were built. Work was started on the installation of railway switches and spurs. This preliminary work was all very necessary, but the men were impatient to smell new pine boards and sawdust. So to get some lumber production started, even though small in amount, the night shift of a French sawmill was leased; this mill could produce only about three thousand feet of lumber each night, but

there was no sufficient reason why the Americans should not have the timber in question, would estimate the amount, appraise the value and mark the timber for cutting. If the owner was satisfied to sell the timber at a reasonable price, his figure would be accepted, but if the owner asked an exorbitant price, the French officer would fix a reasonable price at which the timber would be requisitioned. The French government purchased the timber and resold it to the American Army at cost. Rights of way were obtained in much the same fashion. This system undoubtedly protected the United States from the serious overcharges which would have been possible through our lack of knowledge of French timber values. The value of timber was astonishing to Americans, used to prices of from two to eight dollars per thousand feet on the stump for pine timber in most parts of America; it was found that the pine timber of the Landes was costing from twenty to forty dollars per thousand feet, depending upon quality and location; hardwood of similar quality in central France was even



more costly. With these values in view, it is easier to understand the very close utilization of all classes of material in the French forests.

"The question of amusement and of keeping the men in first-class physical condition, properly disciplined and in good spirits, was an important one and was well looked after. The Y. M. C. A. and the chaplains who were assigned to the regiment performed worthy service in this respect.

"With all hands working ten hours per day, five and one-half days a week, doing clean up work and standing inspection Saturday afternoon, and frequently busy with emergency work on Sunday, the problem of maintaining satisfactory morale was an important one. An intercamp baseball league kept things lively on Sunday afternoons. A battalion band of thirty-seven pieces played on all sorts of occasions; it was especially enjoyed by the

tuted; this resulted in a marked improvement in morale. In the spring, especially with the news of the successful German drives, many of the men became restless and there were many applications for transfer to combatant organizations; if these applications had been acted upon favorably, few would have been left to run the sawmills.

"The men were cordially received by nearly all of the French people. Most of the Americans made at least



LARGE CREW OF AMERICAN ENGINEERS MAKING QUICK WORK OF LOADING LUMBER AND TIES ON FRENCH RAILWAY CARS

French civilians, who had been without music since the beginning of the war. The Y. M. C. A. installed a hut in each camp where such features as reading matter, writing materials, phonographs, billiard tables, pianos, moving pictures, et cetera, were much enjoyed; one of the most appreciated features was the 'Y. M. C. A. lady.' When the fine weather came, men were sent by motor truck each week from some camps to nearby places for a two-day week end holiday. On Sundays some men toured the nearby country on bicycles, and from Pontenx for instance men hiked over the dunes to the ocean for a few hours on the beach. The seashore was especially popular after a torpedoed Portuguese ship was beached, for it had in its cargo three thousand barrels of wine—'pas de vin ordinaire, mais de l'ambroisie.' Military drill had been abandoned during the short days and pressing work of the winter; there was evident a falling off in spirit and discipline; in the spring, short periods of drill on Saturday afternoon and Sunday morning were insti-

a few goods friends among the French. Their efforts to learn the language were earnest and, no doubt, often amusing to the French. The medical officers with the forestry and lumber troops did a great deal for the French civilians. The abbe of the church at Pontenx arranged a special Easter service in English for our men. There were many such exchanges of courtesy, which made for hearty friendship between the French and Americans.

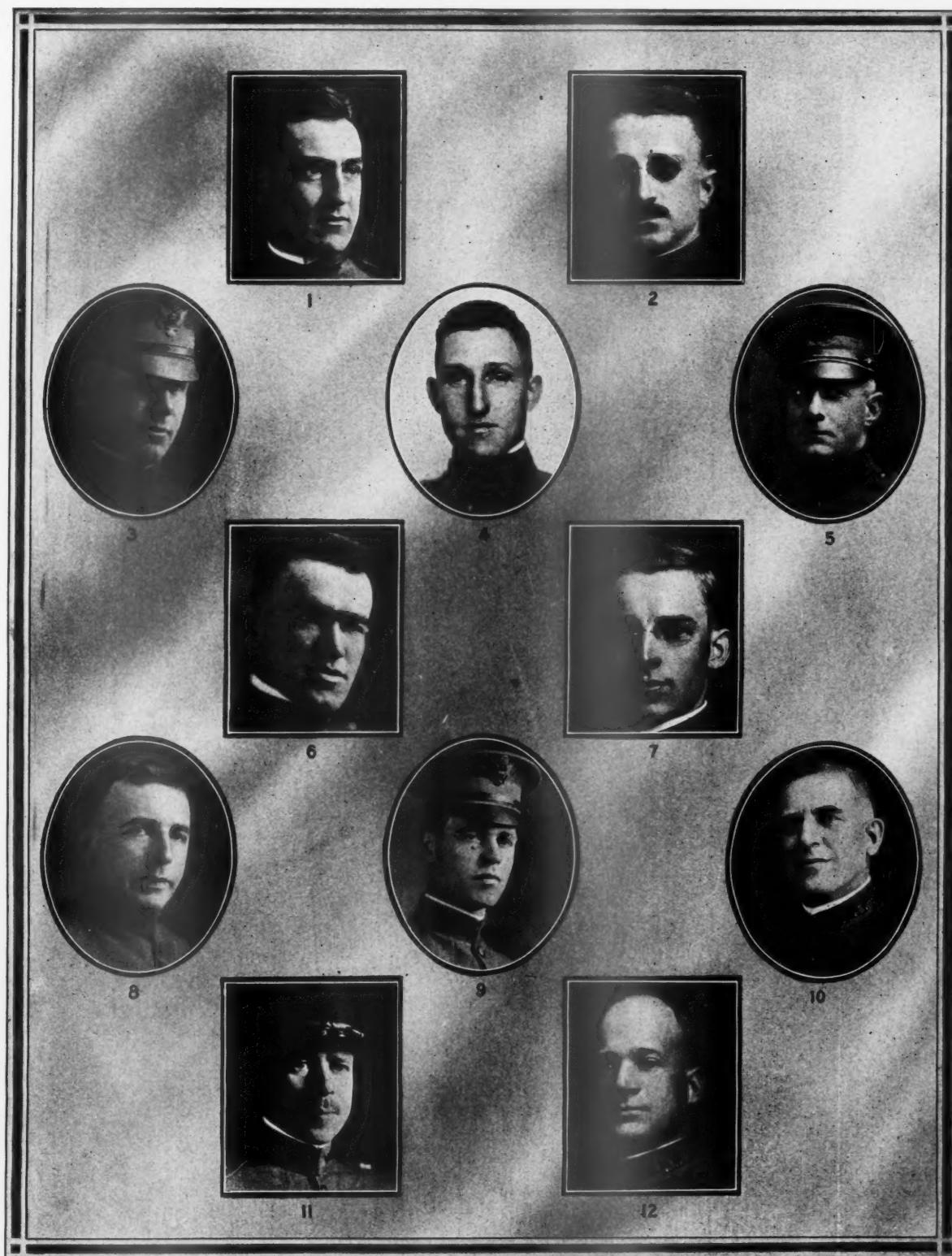
"Unfortunately, the attitude of a few of the peasants in the pine forest districts was not so friendly at first. They said among themselves, 'Look at those strapping big American soldiers. Why do they come here? They are bigger and stronger than our men ever were. While our men, who have been away for over three years, and are still at the front fighting, these Americans come to hide in the forest and to do the work our men should be here doing; they cut the trees that we want to save for our turpentine industry. Why don't they go to the



VIEW OF THE MILL YARD OF THE BOURICOS 20-M AMERICAN MILL NEAR PONTENX, LANDES. A LOG TRAIN HAS JUST BROUGHT THE LOGS OVER THE NARROW GAUGE RAILWAY SYSTEM FROM THE FOREST TO THE POINT WHERE THE LOGS WILL BE UNLOADED ON TO THE SKIDS IN THE FOREGROUND, OVER WHICH THE LOGS WILL BE ROLLED TO THE CARTS AT THE LEFT, UPON WHICH THEY WILL BE PULLED UP THE INCLINE INTO THE SAWMILL. THE GREAT HEAP OF SLABS AND EDGINGS AT THE RIGHT OF THE LOG TRAIN ARE DESTINED TO BE MADE INTO CHARCOAL FOR USE IN A NEARBY MUNITIONS PLANT



A 20-M AMERICAN SAWMILL IN THE SAND DUNES NEAR THE ATLANTIC COAST OF FRANCE. MARITIME PINE FOREST IN THE BACKGROUND

*Photographs by Harris & Ewing*

AMERICAN FORESTRY'S PORTRAIT GALLERY OF OFFICERS OF THE TWENTIETH REGIMENT (FORESTRY)

1. Capt. Harold T. Antrim. 2. 1st Lt. Alexander H. Ellison. 3. 1st Lt. Charles M. Jenkins. 4. 1st Lt. Henry E. Power. 5. Capt. Edwin C. Wemple. 6. 1st Lt. Morton Van Meter. 7. 1st Lt. Marion Nine. 8. Capt. Oliver J. Todd. 9. 1st Lt. Earl B. Birmingham. 10. Capt. W. D. Starbird. 11. Capt. Andrew J. Fisk. 12. 1st Lt. Herbert L. Holderman.

front and fight and let our men come home?" The men even heard the opinion was current among some of the peasants that, if the Allies won the war England would take Northern France and the United States would seize Southern France. Evidently German propaganda was at work. However, the ignorant peasant was not to be blamed too much for his feeling, for he could not see clearly why it was essential that American engineers precede the main American Army in France to get out timber and to use the timber in building docks, warehouses, railroads, hospitals, barracks, et cetera, for the fighting forces coming later on. The intelligent French arranged a series of discussions and took other steps which stilled the complaints of the peasants until the fighting troops appeared at the front in force in the late spring of 1918, when the attitude of all of the French became extremely cordial, where before in some quarters it had been merely polite.

"The impression which the forestry and lumber troops made on the French is perhaps best indicated in a series of compositions written by the school children of a small town. The children were asked by their teacher to write their observations on the Americans; the children had no idea that Americans would ever see what they wrote. [The compositions, published in 'The Independent,' indicate that the children found the Americans cleanly about their persons, polite, good natured, generous, quite free in spending their money and in some cases strongly

inclined to the use of liquor. (It may be said here that, although the American lumberjack in his native habitat is well known as a user of strong drink, there was a remarkably little trouble from this source in France.)] One of the compositions, written by Renee Dourthe, daughter of the schoolmaster, is quoted herewith: 'The work of the Americans is certainly a curious one. I saw them raise huge logs with large pliers, as easily as they would have moved a straw. Their furnaces for their kitchens are half in the ground, in order not to waste any heat. What struck me especially about the American soldiers is their cleanliness. All of them are tall, healthy and strong, owing to their hygiene. Their teeth are very white; and not to soil their hands, they put on gloves, even at work.'

"Another thing I admired also is their politeness. France had the fame of being the most polite nation in the world. We have often heard and read about the French courtesy. Is France going to lose her rank among the well-bred nations?

"I like the American soldiers who came to help France. I like the Americans who came here to defend justice and right. I admire the Americans who remembered France, and who came to her in spite of the many dangers. Long live the United States of America!"

[Owing to the fact that the rosters of several companies failed to arrive from France as this issue goes to press, it is impossible to be certain that the titles of some of the officers mentioned in the article are correct.—EDITOR.]

**WE WANT TO RECORD YOUR MEMORIAL TREE PLANTING. PLEASE ADVISE
THE AMERICAN FORESTRY ASSOCIATION, WASHINGTON, D. C.**



LONG MARTIME PILING LOADED ON AMERICAN NARROW GAUGE CARS READY FOR TRANSPORTATION FROM THE FOREST TO THE MAIN LINE RAILWAY SHIPPING POINT NEAR PONTENX, LANDES, FRANCE

A LESSON FROM FRANCE

By CAPT. RALPH H. FAULKNER, 20th ENGINEERS

AT THIS day when the subject of reforestation is receiving some attention but getting only a very small part of the support, both public and governmental, that it should, we have returning to us 20,000 men who have spent from six to eighteen months in France. These men, whether consciously or not, have had borne in upon them the vast importance of a definite and vigorously applied forest policy.

When the 10th and 20th Engineers left this country it is doubtful whether many of them had any idea of the forest wealth of France. I know it was the opinion of the writer that the duty of the regiments would be to cut the timber from public parks and roadways. In fact, I really visualized the entrance of American lumberjacks into the very backyards of the French inhabitants for the purpose of securing timber. My experience was limited mostly to the southwestern part of France, and as our train passed southward from Bordeaux I felt that whoever had given me the idea that France was denuded of timber had most evidently not referred to that part of the country.

More than one hundred years ago that territory on the Bay of Biscay bounded by the Rivers Gironde at Bordeaux and the Adour at Biarritz, was one vast desert

of sand, unceasingly driven inland by the western winds and mounting into dune after dune. This moving mass of sands, which had gone on for more than a century, submerged the crops and villages. The sand dunes thus irresistibly mounted up at a rate said to be about forty meters per year on a length of over 300 kilometers, and an average breadth of six or seven kilometers. More than 250,000 fertile acres were already covered with sand by 1790, and the inhabitants, quite powerless, witnessed the frightful progress of this devastating plague.

The first people to conceive the idea of combating the advance of the sands were two brothers, Desbrey, who lived at St. Julien-en-born in the Department of Landes. These two men, upon their private initiatives, set about opposing obstacles in the way of wattle-work and the planting of Gorse and Scotch-broom. At this time no one had conceived the idea of planting maritime pine, so that these two brothers stood out as pioneers in a fundamental plan of forestry. All of their efforts, however, proved unavailing for the sands mounted more rapidly than the growth of the Gorse.

About this time public opinion brought such pressure to bear upon the government of Louis XVI that an engineer was appointed to find some means of stopping



SCENE IN A MARITIME PINE FOREST, SOUTHWESTERN FRANCE. BROAD GAUGE SPUR PARALLELED BY LOADING DOCKS ON WHICH ARE NARROW GAUGE TRACKS TO TRANSPORT TIES AND OTHER PRODUCTS FROM THE MILL TO THE FRENCH RAILWAY CARS IN THE CENTER



AMERICAN OPERATIONS IN PROGRESS IN A FRENCH HARDWOOD FOREST. IN THE CENTER A LOAD OF LOGS ON A CAR ON THE WAY UP THE INCLINE INTO THE MILL

the progress of the dunes. In 1779 Baron de Charlevoix-Villers, a Naval officer, was ordered to study the creation of a naval port at Arcachon. He submitted several papers showing that moving sands could be fixed by vegetation, really adopting the process used at that time at Dunkirk. However, he was unable to put his plans into execution, through transfer to other duties, and for five years the crying need for permanent fixation of the dunes in the Landes and Gironde was permitted to drag on.

In 1784 Nicolas Bremontier, an engineer, born near Rouen, was appointed chief surveyor at Bordeaux. To this man is due probably the existence of the present maritime pine forests in France for he put into execution the researches of Despiey and Charlevoix-Villers. He secured permission from the government to give two years of study to the problem of the sand dunes, and before this time was up, by the pure lights of his views and the persuasive strength of his faith he at last interested the government in the great work of creating forest land out of a vast desert.

At the beginning of 1787 a sum of 50,000 livres was placed at his disposal for the commencement of the work of forestation in his district. It was not until the middle of that year that the first experiments of Bremon-

tier were made. Having profited by the failure of Despiey in the mere planting of gorse he conceived the idea of planting maritime pine and he followed this course successfully until 1793, at which time his government failing to provide funds, he was forced to discontinue his efforts. However, this valiant Frenchman, who had ever the courage of his convictions, was not daunted and applied to the learned societies of France for assistance, having proven to himself and to the inhabitants of this country that the fixation of the dunes was a possibility. He fought with persistent effort and with an admirable earnestness for both the attention and the resources of his government. It was not an easy thing at this time, if one will refer to French history, to convince a government that a plan of forestation deserved important consideration, for it was about this time that France was in the throes of her revolution.

Bremontier saw the changing of a mighty tract of land from a desert of sand, whose yearly encroachment inland was threatening and wiping out entire villages, to a huge forest which would give competence to the populace which it had steadily driven back, and for his unwearied persistence he is entitled to the gratitude of posterity.

It was not until July 2, 1801, that Bremontier was successful in creating a committee, appointed by the Minister for the Home Department (I should judge this to be the same as our Department of the Interior), with instructions to "continue to fix, plant and care for the growth of trees on the sand dunes on the Bay of Biscay." Bremontier, very properly, was made President of this Committee and the work was resumed in the Department of Lands, in 1803 at Lit and Mimizan (where the fourth battalion of the 20th Engineers was located). After this the planting of trees went on uninterruptedly and with increasing activity until 1865 when the primary project was announced by the French Government as completed. The total cost over this entire time was less than 14,000,000 francs (\$2,800,000) and now today, with a very perfect forest plan carried out, those sand dunes which in 1790 threatened all of Southwestern France, have been transformed into an immense forest and exhaustless source of income for the inhabitants. The vast majority of the inhabitants of the Gironde and the Landes, most especially the Landes, find employment with good remuneration in the exploitation of the present-day forest.

It was an admirable victory of human intelligence over brutal nature and indisputably this one man, Bremontier, who died in Paris in 1809, deserves the gratitude of not

only the people of France, but of all those interested in forestry throughout the world.

From this district there is shipped to Great Britain alone over 800,000 tons of pit props per year to say nothing of the shipment of resin and turpentine, and until 1914 an average of approximately 600 shiploads per year of forest products left the ports of Bordeaux and Arcachon. Germany, Switzerland, Italy, Holland and Russia, were all purchasers of this product, which was made possible by the indomitable will of this real hero of France to whom two monuments have been built in the heart of the land which he veritably made.

We have, in America, a district on our South Atlantic seaboard quite similar in soil property to that of the Department of Landes in France, and while we rest on our oars, with a firm conviction that our timber supply is inexhaustible, we must be brought to the realization that this supply is ever moving westward. There are those who scoff at a policy of reforestation, but the work of the man and the eminent success of the man who is the subject of this article, stands out forever as a refutation of any argument against a sane forest policy. Whether or not we have in the United States a Bremontier I do not know, but if we have, it is high time that he come forth and perpetuate our forest East of the Rockies.



WINTER SCENE AT ONE OF THE SAWMILLS IN FRANCE

WAR SERVICE OF THE AMERICAN FORESTRY ASSOCIATION

THE American Forestry Association determined when the United States entered the war to do all it possibly could to aid in the nationwide movement for victory and, as it felt particularly interested in the organization of the forestry and lumberjack regiment, it is perhaps not inappropriate to mention to the men for whom this issue of the *AMERICAN FORESTRY* magazine is made a souvenir edition, some of its activities.

It aided, through its Conservation Department, the National War Garden Commission organized in March, 1917, and conducted until June 1, 1919. This commission, conceived, directed and financed by Charles Lathrop Pack, president of the American Forestry Association, inspired the planting of war gardens on vacant lots and slacker land throughout the United States. It furnished instruction to individuals, it organized communities, it distributed literature, it—in a word—did everything worth doing to help raise food where none was raised before in order to help, as General Pershing expressed it, "to keep the food coming." Its work resulted in food of a value of over a billion dollars being raised by the war gardeners. It furnished equipment for a war garden at Camp Dix, New Jersey, and this garden inspired the planting of gardens at other camps of soldiers. Its plan of work was closely studied by the French, British and Canadian governments and some of its methods were successfully adopted by these governments. Its work was conducted from the offices of the American Forestry Association, in Washington.

The Association started a fund for the welfare and comfort of the forestry and lumberjack soldiers, as told in detail on another page.

In December, 1919, members of the Association raised a special fund and sent Secretary Percival S. Ridsdale to France, Belgium and Great Britain to study the forest losses of these countries. The result of the trip was an offer by the Association to provide American forest tree seed to help in reforesting the war-stricken forests of these countries. This offer was gratefully accepted, and an effort is now being made to secure the seed needed, partly by donations from states and partly by a fund which is now being raised.

The Association's magazine, *AMERICAN FORESTRY*, devoted a great deal of its space to articles and photographs about the effect of the war upon the forests of the United States, Canada, France, Belgium and Great Britain, and many more such articles are now in hand ready for publication.

Copies of *AMERICAN FORESTRY* Magazine were sent to the 20th Regiment in France and to the camps in the United States each month.

The Association is now aiding the Welfare Fund Committee to secure positions for lumbermen and foresters in War Service.

It has since the fall of 1918 earnestly urged the planting of Memorial Trees in tribute to those who gave their lives for their country or offered their lives in the Great War. Thousands of Memorial Trees have been planted and many thousands more will be planted next fall. The movement is spreading rapidly, and in addition to its fitness from the standpoint of memorial tributes it is also most serviceable in the cause of forestry by interesting thousands of people in trees.

"THE GREAT TREE MAKER"

From every section of the United States the American Forestry Association is getting reports of Memorial Tree planting and is registering these trees on its national honor roll. Georgetown University has dedicated fifty-four memorial trees at its 120th Commencement and marked them with the bronze marker designed by the Association. At San Francisco a Hero Grove was dedicated on Memorial Day and Cleveland on the same day dedicated an avenue of Liberty Oaks. Twenty schools in Cincinnati have planted Memorial Trees. The Daughters of the Confederacy are planting Memorial Trees, the Cordele, Georgia, Chapter being the first to register with the Association. The Daughters of the American Revolution are planting, too, the "Our Flag" Chapter, of Washington, D. C., being the first to report to the Association.

Rev. Francis E. Clark has sent a call to the Christian Endeavor Societies of the world to plant Memorial Trees. "Thus

come closer to the Great Tree Maker," says Dr. Clark in his call, which will have far reaching effect. The American Forestry Association will gladly send free instructions to any person or organization planting trees, and it has prepared a planting day program which is being widely used. These are but examples of how wide spread the call of the Association to plant Memorial Trees has become.

Next fall more extensive planting is being planned. In the next issue American Forestry will begin printing the honor roll of those for whom trees have been planted. Every member of the Association can help in this great work by taking the lead in tree planting in his community. Start plans for fall planting in your town now. Work for a Memorial Avenue of trees or for Memorial Trees as the setting for any form of memorial your town may be adopting. Inform the Association of progress made.

JOBS FOR RETURNING LUMBERMEN AND FORESTERS

THE Welfare Fund for Lumbermen and Foresters in War Service has undertaken the task of aiding lumbermen and foresters released from war service to secure positions. The lumber organizations, the lumber trade papers, lumber companies and the American Forestry Association are aiding in this work.

Applications on sheets similar to the one on the next page are now being received by the American Forestry Association and forwarded by the Welfare Fund Committee to lumber organizations and lumbermen throughout the United States who will communicate directly with the men desiring the jobs.

Any men who wish aid in getting jobs and have not yet filed applications may do so now on the application blank printed on the next page.

Lieut.-Col. W. B. Greeley, of the 20th, in writing from France under date of April 26, 1919, to Percival S. Ridsdale, treasurer of the Welfare Fund, says:

"The officers of the 20th Engineers have been considering the question of assisting our returning soldiers to obtain employment in the United States. The policy of the American Expeditionary Forces to evacuate the troops in France rapidly during May and June has made it necessary to act promptly in this matter; and we have accordingly put the following plan into effect. Each company commander of the 20th Engineers and attached Service Troops will be sent a supply of printed forms. The company commanders have been requested to have such forms filled out by any men in their command who desire assistance, to append their own estimate of the soldiers qualifications and character, and to mail the applications direct to the American Forestry Association, Washington, D. C. The time limits have made it necessary to put this scheme into effect without waiting for prior consultation with yourself or with the lumber organizations who are interested; but I feel that any plan to aid returning soldiers in this manner must begin with specific data on individual cases.

"All of the units of technical white troops, including the road battalions, which have been employed on forestry work in France and have not previously returned to the United States are to be released during the month of May; and may be expected to arrive in the United States roughly between May 20 and July 1. These units comprise approximately 9,700 men. Eight hundred negro Engineer Service Troops which have been employed upon forestry operations will also probably arrive in the United States between May 20 and July 1. The remaining negro Engineer Service Troops in France, aggregating about 5,600 men, will probably arrive in the United States

between June 20 and August 1. Several of the battalion commanders estimate that approximately 50 per cent of their men will desire assistance in obtaining employment.

"I fully appreciate that the plan which I have taken the liberty to initiate and the suggestion contained in this letter represent a large volume of work for the friends of the forestry troops in the United States. It is my strong conviction, however, that no greater service can be rendered to these men in recognition of the sacrifices which many of them have made in coming to France than to assist them in finding suitable employment under some such scheme as that indicated. I also feel that the large sums subscribed for welfare work for the forestry troops could not be expended to any better advantage. Furthermore, the forest industries at home have an interest of their own in getting in touch with a large proportion of these men. Our troops have been employed continuously upon industrial operations in France, under conditions which have tended to develop their technical skill and their resourcefulness to a high degree. Many of them have developed mechanical ability as mill sawyers, saw filers, motor truck drivers and mechanics, engineers and loggers which they did not have when they entered the army. Others have become capable teamsters, capable men on logging railroads, and the like. Many of them have profited greatly by the discipline and sense of organization developed in military service. These men represent, in the aggregate, an enormous economic asset to the United States and especially to the forest industries. It will be, in my judgment, of the utmost mutual advantage to men securing employment and to employers to do everything possible to get these returning soldiers placed so that their individual abilities can be put to the most productive use.

"I have also requested the company commanders to send to you direct statements concerning such cases as they may have where they feel that financial assistance should be extended to returning forestry soldiers on account of family distress, physical disability, or other good reasons, with their own recommendations as to what should be done. I do not anticipate that there will be many cases of this character. The majority of our men are in better condition physically than when they entered the army; and they have been spared the disabilities incurred by combat units. There will undoubtedly be many cases of physical disability among lumbermen who enlisted in combat units, but I know of no way to get in touch with these cases except through the receiving hospitals of the army in the United States."

EMPLOYMENT SHEET

FOR SOLDIERS WHO WISH LUMBERING OR FORESTRY JOBS

Name: Rank: Unit:

Married or Single: Age:

Address in France:

Address in United States:

Kind of work desired:

Section of U. S. preferred:

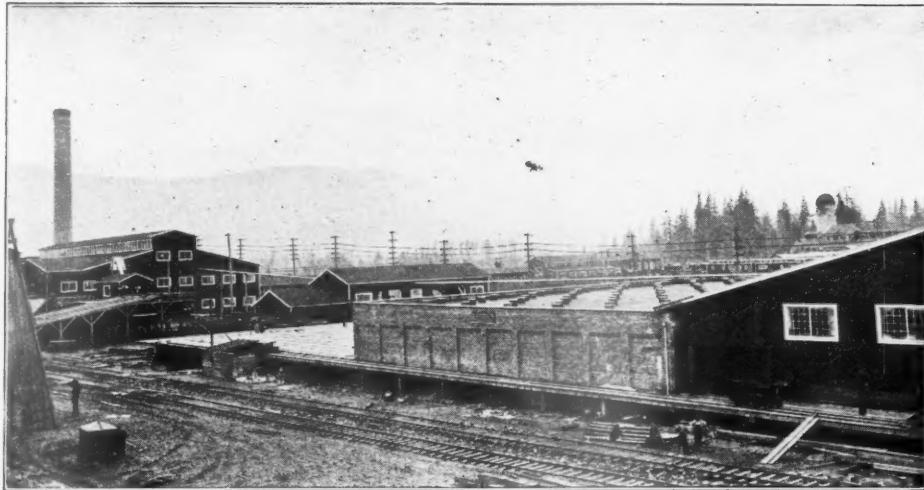
Past experience and qualifications:

Name and address of last employer:

Other references:

Recommendation of Company C. O.:

NOTE: THIS SHEET SHOULD BE SENT TO THE AMERICAN FORESTRY ASSOCIATION, WASHINGTON, D. C., THE HEADQUARTERS OF THE WELFARE FUND FOR LUMBERMEN AND FORESTERS IN WAR SERVICE. THE APPLICANTS WILL BE INFORMED OF OPPORTUNITIES FOR EMPLOYMENT OR OF THE NAMES OF MEN IN THEIR HOME REGION WHO WILL BE PREPARED TO ASSIST THEM IN GETTING WORK.



A battery of Moore Moist Air Dry Kilns at Snoqualmie Falls Lumber Company's mill, near Seattle, Washington, on the Pacific Coast. This is the latest of the Weyerhaeuser group of mills, and is said to be the most modern lumber manufacturing plant in the world.

FROM THE ATLANTIC TO THE PACIFIC

you will find many of the

Largest and Most Progressive Lumber Mills

are using

MOORE'S MOIST AIR DRY KILN

for drying their product.

HERE ARE A FEW OF OUR MANY CUSTOMERS:

Central Coal & Coke Co., Kansas City, Mo.
Weyerhaeuser Timber Co., Everett, Wash.
Eastman, Gardner & Co., Laurel, Miss.
National Steel Car Co., Hamilton, Ont., Can.
Westside Lumber Co., Tuolumne, Calif.
Freeman, Smith Lbr. Co., Millville, Ark.
Savannah River Lumber Co., Savannah, Ga.
Bagdad Land & Lumber Co., Bagdad, Fla., and Chicago, Ill.
Lucier & Moore Lumber Co., Orange, Texas.
Roland Lumber Co., Norfolk, Va.
E. E. Jackson Lumber Co., Riderwood, Ala., and Baltimore, Md.
Ragley Lumber Co., Ragley, La.
Buehner Lumber Co., Portland, Oregon.

Kirby Lumber Co., Houston, Texas.
Texler Lumber Co., Allentown, Pa., and Allen, S. C.
Pickering Lumber Co., Kansas City, Mo.
Goodear Lumber Co., Picayune, Miss.
Burton-Swartz Cypress Co., Perry, Fla.
Fosburgh Lumber Co., Norfolk, Va.
S. H. Bollinger & Co., Shreveport, La.
Vredenburgh Sawmill Co., Vredenburgh, Ala.
Standard Lumber Co., Live Oak, Fla.
North Portland Box Co. (Swift & Co.), Portland, Ore.
W. P. Brown & Sons Lumber Co., Louisville, Ky.
Dunlevie Lumber Co., Allenhurst, Ga.
Long-Bell Lumber Co., Kansas City, Mo.

We build kilns to suit the exacting requirements of each individual mill. We began building kilns in 1879. Forty years of continuous and successful kiln building enables us to render you real service. Why experiment? Write for catalog explaining our system.

MOORE DRY KILN CO.,

Box 1177,

Jacksonville, Fla.



Showing 14 Moore Moist Air Kilns (they are operating a total of 34 Moore Kilns) at plant of Atlantic Coast Lumber Corp., Georgetown, S. C., on the Atlantic Coast. This is the largest board mill in the world, having a daily capacity of three-quarters of a million feet in boards.

**THEY CALLED IT AMEX TIE MILL
WE CALL IT
AMERICAN EMPIRE BOLTER**

95

OF THEM HELPED THE BOYS OF THE FORESTRY
DIVISION MAKE HISTORY IN FRANCE



**24476 The Amex tie Mill, 20th Engrs.
France.**

Lieut. Glenn H. Holloway, of the 20th Engineers, writing in the December 21st issue of The Southern Lumberman, says:

"The American Saw Mill Machinery Company furnished the bolter or tie mill, which is answering its purpose admirably. We only have to face these ties on two sides, so if you get the right sized poles and don't stop to cut any side plank it is possible to cut 30,000 feet in ten hours, once in a while, but the average is nearer 15,000 feet for a ten-hour shift."

SAW MILL MACHINERY OF EVERY DESCRIPTION

CATALOG ON REQUEST

OUR WAR BOOK, A Souvenir Record of the Work of 1200 American Machines, Free on Request

American Saw Mill Machinery Company

1398 HUDSON TERMINAL BLDG.

- - - - - NEW YORK

THE WELFARE FUND

WHEN the forestry and lumberjack regiment was organized the American Forestry Association started the collection of a Welfare Fund for the purpose of supplying the men with comforts needed and with means for recreation to aid in keeping up their morale. This fund was later developed into the Welfare Fund for Lumbermen and Foresters in War Service, with the following officers: Honorary chairman, R. H. Downman, Council of National Defense, Washington, D. C.; acting chairman, W. R. Brown, Berlin, N. H.; secretary, E. A. Sterling, New York City; treasurer, Percival S. Ridsdale, secretary American Forestry Association, Washington, D. C. The members of the committee are: R. H. Downman, W. R. Brown, E. T. Allen, E. A. Diebold, M. E. Preisich, for the Lumber Industry; W. A. Priddie, E. D. Tennant, for the Order of Hoo-Hoo; A. F. Potter, W. L. Hall, for the U. S. Forest Service; Charles Lathrop Pack, for the American Forestry Association; James Boyd, John W. Long, for the Lumber Trade Press.

The Welfare Fund was devoted to purchasing wool to be knitted into sweaters, scarfs, socks, helmets, etc., to furnishing phonographs, athletic supplies and various articles needed by the men, and in providing funds for the use of the men when their pay failed to arrive. It was also

used in caring for sick and needy persons in the families of soldiers and after they had been ordered home it was used in the endeavor to secure work for those who desired jobs. It is still being used for this particular purpose. The method of finding jobs for jobless men is described on pages 1159 and 1160.

Senior Chaplain Howard Y. Williams of the 20th Regiment, in writing on February 25 from France about the use of the fund, said:

"The welfare fund raised for the men of the 20th Engineers is unique in the A. E. F. No other organization that I know of has had such splendid backing as the forestry troops in France. The \$4,000 sent seemed a fortune when it stood to our credit in a French bank for 22,400 francs. Almost 3,800 francs was assigned to work among the pioneer forestry engineers, the 10th Regiment. Athletic supplies, indoor games, phonograph records, needles, books, sheet music, refreshments for evening parties and other like necessities have been purchased with this fund. One of the large uses to which it has been put has been that of loans. The fund has been put out on loans several times over and has proved a friend indeed to men in need. It has made it possible for men to go out on leave; it has brought to men discharged from hospitals, who had not seen a pay day for



LISTER BAGS ("CARRIE NATION COWS") CONTAINING CHLORINATED WATER FOR DRINKING PURPOSES. BELLEVUE CAMP, PONTENX, LANDES, FRANCE

some time, pocket money to start them on the trip home. This fund has always meant that men and worthy objects could find financial assistance.

"The balance of the fund used distinctively for the 20th Engineers, after initial expenses for entertainment equipment had been provided, was divided among the different battalions on a per capita basis and used by the company commanders as they deemed best in supplying the various needs of their companies. These battalion funds have always been at the disposal of the battalion chaplain and have proven a great blessing.

"The thirty-eight phonographs bought from this fund and forwarded from the States to each one of the original engineer companies have found continual use, sending forth their melodious sounds from tents, barracks, old barns, dugouts, and often used in the open air. These phonographs have proven the opportunity for many a friend in the States to express his interest in us by forwarding phonograph records. I shall never forget standing in front of a dugout in Puvenelle Wood, in the midst of devastation, when suddenly there came upon my ear the voice of John McCormack as played on one of these machines. The contrast between this evidence of civilization and the absolute lack of it around me was tremendously striking.

"Warm clothing is always a necessity in the ever-present humidity of France. The sweaters made from the wool purchased by this fund are a daily comfort to these men, who often have labored all day long in torrents of rain, returning to their tents to find a good warm sweater waiting.

"During these days of waiting to come home, we are bending all our efforts to provide entertainment, parties, educational classes that will occupy the minds of the men and that shall prepare them for larger services in the future. We shall use this fund in every way to provide these events.

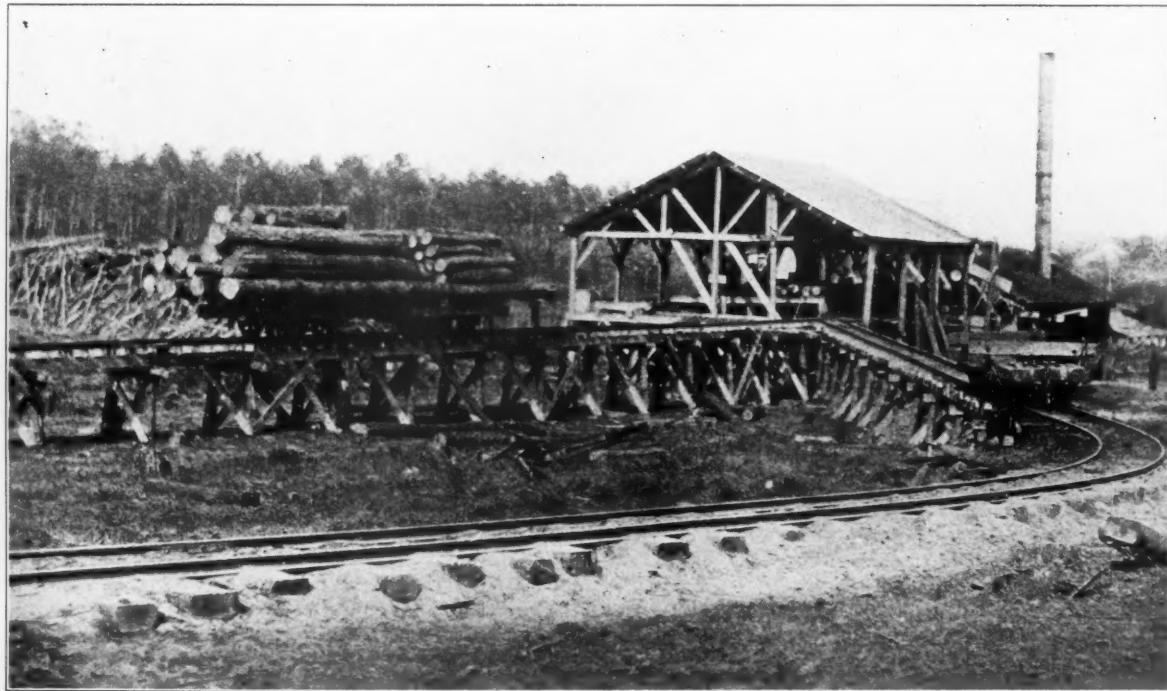
"Twenty thousand soldiers united with me in expressing gratitude to those who have made all these things a reality and a daily reminder of your interest."

The list of donations received by the Welfare Fund is published on pages 1168, 1173, 1175, 1177 and 1178.

HOW THE FOREST SERVICE HELPED

From the day that the 10th Engineers was organized the members of the Forest Service took a deep interest in the regiment and were anxious to find ways in which they might forward the comfort and happiness of the men. The Service had co-operated with the War Department in recruiting the regiment, and a great many of its men were on the regimental rolls. A suggestion that an ambulance would be of great value was seized upon with eagerness, and during the summer of 1917 contributions poured in from the members of the Forest Service in all parts of the country. A fund of \$4,274.68 was raised, more than enough to purchase two motor ambulances and two kitchen trailers. One of these ambulances and its trailer was paid for entirely by the Northwestern District. The remainder of the fund was used to buy a photographic developing outfit for the 10th Engineers and wool to be made into knitted garments.

In September, 1917, when the 10th was ready to leave



MARITIME PINE LOGS ON THE WAY INTO 20-M AMERICAN SAWMILL IN FOREST OF THE DUNE COUNTRY IN SOUTHWESTERN FRANCE

SIMONDS SAW STEEL PRODUCTS



THE Naval Bureau of Ordnance designed, constructed in the United States, shipped and re-erected abroad, and placed in action on the fighting front, a battery of the finest guns used by any belligerent in the war. One of these is illustrated above.

Simonds Saw Steel was selected *exclusively* for the armor plate on this equipment and was supplied in *record-breaking time*, for the gun and the cars making up each complete gun unit.

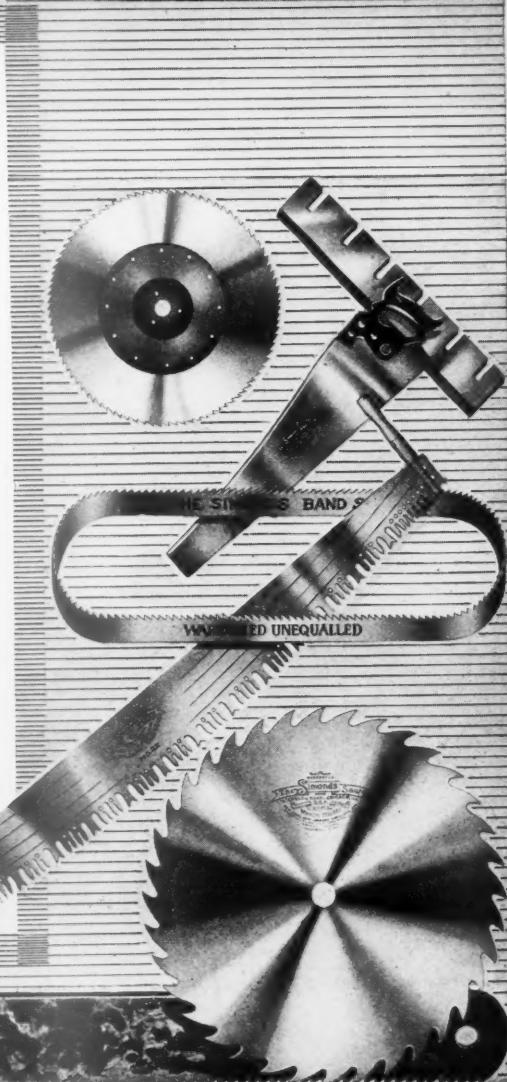
This steel was selected because at that time, early in 1918, it was a well-established fact that the Simonds Manufacturing Company had the best reputation for quality and the most up-to-date facilities for speed of any concern in the United States manufacturing this class of steel.

We also supplied enormous quantities of Simonds Cross-cut Saws, Hand Saws, and Circular Saws, Solid and Inserted Tooth. When you want saws, write us. Catalog sent on request.

SIMONDS MANUFACTURING COMPANY

"THE SAW MAKERS"

CHICAGO, ILL. FITCHBURG, MASS. MONTREAL, QUE.
NEW YORK CITY NEW ORLEANS, LA. MEMPHIS, TENN.
PORTLAND, ORE. SAN FRANCISCO, CAL. SEATTLE, WASH.
LOCKPORT, N. Y. VANCOUVER, B. C. ST. JOHN, N. B.
LONDON, ENGLAND



Welcome Home 20th Engineers

Your noble work in The Great War is completed.

The great efforts you put forth—the great assistance rendered the A. E. F.—was largely instrumental in turning the tide of conflict and in speedily ending the war.

Your untiring efforts must now be devoted to reconstruction work in the good old U. S. A.

The lumber industry welcomes you home—there is a great need for your valuable services and assistance.

The future of the lumber business is indeed bright. Building operations have been greatly curtailed during your absence but with settled business conditions here great strides will be made in an effort to partially catch up.

You will be interested to learn that every man from this organization now in service will be furnished employment immediately upon receiving his discharge.

Crookston Lumber Company

SALES DEPARTMENT



903 First National-Soo Line Bldg.

Minneapolis, Minn.





SNAKING BIG LOGS, THREE AT A TIME, IN A BIG SAWMILL OPERATED BY THE AMERICAN FORESTRY ENGINEERS AT ST. DOZIER ON THE MARNE

for France, money was appropriated by the Department of Agriculture ambulance fund committee for the purchase of six phonographs and records to accompany them. The day the 10th left Washington these were bought and sent to the camp at American University in time to go across with the regiment.

In the fall of 1917 when knitting for soldiers began to be pushed vigorously by the Red Cross, the women of the Forest Service saw their opportunity and took up enthusiastically the making of knitted garments for the men of the Forest Regiments. Wool was bought with money left over from the ambulance fund, new funds were raised, and the work grew to such proportions that regular means had to be provided for handling the wool and distributing the garments. Early in November a women's committee was formed, with Mrs. Henry S. Graves as chairman and Mrs. Lilian T. Conway in charge of organization. This committee took over the purchasing of wool and other supplies, and the making of knitted garments and sending them to the men.

The supplying of comfortable woolen things was the main work of the women's committee. Of course, everybody knew that the lumberjack has plenty of experience in making the best of hardship and discomfort, and that the men of the Forest Engineers had gone to France ready and willing to endure many a visit from these old acquaintances. But frost-bitten toes and a chilly spinal column never made anyone's work improve, and so, as the Chaplain of the 10th put it, "the sound of sweaters in the making was received with great joy" over there.

The sweaters and other knitted garments, however, were not all. The purpose was also to promote cheerfulness in the camps, and one way of doing this was to

send Christmas things. The first work of this kind that the committee did was to get together, pack, and ship a large box of Christmas things donated by the members of the Washington office of the Forest Service. This box contained 126 knitted garments, 164 bags, 75 cans, and 18 packages of tobacco, 2,500 cigarettes, and a quantity of candy, chewing gum, and pocket flash lights. Special arrangements were made to have this box go forward with Red Cross shipments to France, and it was with considerable satisfaction that those who had packed it saw it start on its way on November 15. It did not arrive in time for Christmas. In fact, with this shipment began the difficulties with which the women's committee had to contend all through the war in getting its material into the hands of those for whom it was intended. The boys knew that the box was coming, but they had such a long wait before it arrived that fears began to be entertained that it had gone to the bottom with some torpedoed ship. At last came the word, in a letter dated June 26, 1917: "We received here yesterday a large Christmas box containing a splendid and most welcome assortment of things for the men. . . . I can not but remark with what accuracy of planning and dispatch the box reached us an even and exact six months after the date on which you proposed it should reach us. But not one regret is there, and not one man but is most delighted that the shipping authorities so cleverly divided our 'from home' Christmas pleasures half way between Christmases."

As the 20th Engineers was being organized, the battalions were encamped successively at American University, Washington, D. C. Practically every man in these battalions was supplied with a sweater, and many were

given socks, wristlets, scarfs, and helmets, through the efforts of the Forest Service in co-operation with the Potomac Division of the Red Cross. By March 18, 1918, the committee was able to announce that, with the assistance of the Red Cross, the 10th and 20th Engineers had been supplied with sweaters so that practically every man had one.

The success of the plan to outfit the Forest Engineers with knitted garments was due to the constant and enthusiastic support of the women of the Forest Service in Washington and throughout the western Districts. They kept at the knitting all the time, and continually asked for wool and then more wool. The only difficulty was keeping them supplied. The workers knitted enthusiastically all through the summer of 1918, and the sudden coming of the armistice in the fall found the storage space of the committee filled to overflowing. There was no way of getting these garments across to the Forest Engineers in France. In the fall and winter, with the approval of the committee in charge of the "Welfare Fund for Lumbermen and Foresters in War Service," the garments on hand were distributed to sailors, soldiers at St. Elizabeth's Hospital, hospital orderlies at Camps

Meade and Humphreys during the Spanish influenza epidemic, and the Serbian Relief Committee.

The War Department announced in the fall of 1918 that each soldier in the American E. F. would be allowed to receive one Christmas box, and that he would be given a label which would have to be put on the package before it could be shipped. This order suggested the possibility that there might be some men in the Forest Engineers without any one to whom they cared to send the label. A cablegram was sent by the treasurer of the Welfare Fund to the commander of the 20th Engineers offering to send Christmas boxes to any of the men in the regiment. Labels were received from 283 men. The purchasing of the articles to go into the boxes and the packing was done by ladies of the Forest Service. Special care was taken to provide, so far as the small size of the box permitted, a variety of articles which would be useful to the men and at the same time embody the spirit of Christmas cheer. A number of labels arrived after the Christmas ship had sailed for France. This was a source of great regret, but, as the next best thing to a box, each man whose label came too late was sent a money order and a Christmas card.

DONATIONS TO THE WELFARE FUND FOR LUMBERMEN AND FORESTERS IN WAR SERVICE

TOTAL, \$19,424.44

Achenbach, Naomi, Everett, Wash.	\$3.00	Blanchard Lumber Co., Boston, Mass.	\$3.00
Acorn Club, Seaford, Del.	5.00	Blanchard, A. F., West Acton, Mass.	10.00
The Acorn Lumber Co., Pittsburgh, Penna.	25.00	Blodgett Company, Grand Rapids, Mich.	25.00
Aberdeen Lumber Co., Pittsburgh, Penna.	25.00	The Blytheville Lumber Co., Blytheville, Ark.	10.00
Albert Hanson Lumber Co., Garden City, La.	100.00	Bodwell, Don R., Kansas City, Mo.	1.00
Alexander Bros., Belzoni, Miss.	5.00	In Memory of S. G. B.	10.00
Alexandria Lumber Co., Alexandria, La.	50.00	Bogert, Miss Anna, New York City	2.00
Allen Mfg. Co., Shreveport, La.	50.00	S. H. Bolinger & Co., Shreveport, La.	5.00
The Edmond A. Allen Lumber Co., Chicago, Ill.	5.00	Bomer Blanks Lumber Co., Blanks, La.	5.00
Allen, E. T., Portland, Ore.	5.00	Borreson, Jules T., Pine Bluff, Ark.	10.00
Amsler, Col. C. W., Clarion, Penna.	10.00	Boswell & Son, F. S., Elgin, Ill.	5.00
Anderson-Tully Co., Vicksburg, Miss.	15.00	Bounds, J.	2.00
Angelina County Lumber Co., Kelty, Tex.	10.00	Bowie Lumber Co., Bowie, La.	100.00
Arkansas Land & Lumber Co., Malvern, Ark.	25.00	Boyd, James (received through Mr. Tennant)	5.00
Arkansas Short Leaf Lumber Co., Pine Bluff, Ark.	10.00	Bradley, E. J., Pottsville, Penna.	5.00
Ascension Red Cypress Co., Ltd., New Orleans, La.	25.00	Brady, J. E. (through E. D. Tennant)	1.00
Asheville, N. C., Members of Hoo-Hoo (received through Mr. Tennant)	10.55	Brendon, Robert, Woodcliff-on-Hudson, N. J.	2.00
E. C. Atkins & Co., Memphis, Tenn.	10.00	The Bright-Books Lumber Co., Savannah, Ga.	10.00
Atwater, Henry, Bridgeport, Conn.	10.00	Brooks-Scanlon Co., Kentwood, La.	25.00
Bach, J. N., Fairbury, Ill.	5.00	Brooks, Bertha G., New York City	2.00
Badger Lumber Co., Kansas City, Mo.	10.00	Brown Lumber Co., Shamrock, La.	25.00
Baldwin Lumber Co., Baldwin, La.	25.00	Brown & Co., George W., Memphis, Tenn.	50.00
Bannister, F. J. O., Kansas City, Mo.	5.00	Brown, Mrs. Harry G., Columbia, Mo.	1.00
Barage Lumber Co., Barage, Mich.	10.00	W. P. Brown & Sons Lumber Co., Louisville, Ky.	25.00
Bard, Anna G., Hueneme, Calif.	2.00	Brown, W. R., Berlin, N. H.	500.00
Barnes, Miss Anne Hampton, Devon, Penna.	20.00	Brownell-Drews Lumber Co., Morgan City, La.	25.00
Barr-Holiday Lumber Co., Louise, Miss.	25.00	Brownell, R. G., Williamsport, Pa.	25.00
E. P. Barton Lumber Co., Charleston, S. C.	50.00	Bruner, E. Murray, Rio Piedras, Porto Rico	5.00
Basilian Lumber Co., Isabela, Basilian, P. I.	50.00	Bullard, F. F. (through E. D. Tennant)	5.00
Batcheller, Robert, Washington, D. C.	25.00	Burton-Schwarze Cypress Co., Burton, La.	100.00
Batson-McGhee Co., Inc.	10.00	J. H. Burton & Co., Washington, D. C.	50.00
Baxter Lumber Co., Wildsville, La.	10.00	Buschow Lumber Co., Kansas City, Mo.	10.00
Bayou Land & Lumber Co., Yazoo City, Miss.	10.00	Butler, Miss Virginia, Stockbridge, Mass.	9.00
Beal, Mrs. James H., Boston, Mass.	2.00	Cabot, Mrs. William R., Boston, Mass.	4.00
Beckwith, Mrs. Daniel, Providence, R. I.	25.00	Caddo River Lumber Co., Kansas City, Mo.	10.00
Beckwith, Isidor T., New York City	10.00	W. M. Cady Lumber Co., McNarry, La.	100.00
Beebe, W. M., Kansas City, Mo.	5.00	Calcasieu Long Leaf Lumber Co., Lake Charles, La.	75.00
Beigham, L. F., Chestnut Hill, Mass.	12.00	The Caldwell Lumber Co., Oil City, Penna.	2.00
J. A. Bell Lumber Co., Lake Charles, La.	40.00	Cale, D. H., Wichita, Kansas	5.00
Beilgrade Lumber Co., Louise, Miss.	10.00	Carey, Arthur E., Boston, Mass.	5.00
Bemis, H. C., Bradford, Penna.	25.00	Carpenter, Mrs. Charles J., New Brunswick, N. J.	4.00
Bemis, J. M., Boston, Mass.	1.00	Carrier Lumber & Mfg. Co., Sardis, Miss.	25.00
Berwick, Seth E., Chicago, Ill.	5.00	Carter, E. T., New York City	1.00
Berwind, John E., New York City	100.00	Carey, Miss G. S., Boston, Mass.	2.00
The Biltmorean (by Mr. H. D. House, Albany, N. Y.)	5.00	Case Fowler Lumber Co., Macon, Ga.	20.00
Birkie, John A., Williamsport, Penna.	3.00	Central Lumber Co., Shreveport, La.	5.00
Bissell, John H., Detroit, Mich.	10.00	Central Penna. Lumber Co., Williamsport, Pa.	250.00
Blackman, W. R., Los Angeles, Calif.	3.00	Chace, Fenner A., Fall River, Mass.	5.00
Blake, George B., Lenox, Mass.	25.00		

WILLAMETTE LOGGING DONKEYS

TO MEET particularly the severe conditions of large timber and rough country, Willamette Logging Engines have been developed. The complete Willamette Line embraces Ground Yarding Engines, Long-Haul Road Engines, Overhead Skidders, High-Lead Yarders and Two-Speed Engines. Their adoption by big operators speaks for their continuous, efficient performance.

WILLAMETTE IRON & STEEL WORKS

Manufacturers of Logging Machinery

Portland, Oregon

U. S. A.



Buy Yellow Pine Lumber Because It Is Good

NOT BECAUSE CHEAP

You wouldn't buy clothes or food on price alone? Then why do you let material go into your **home**, only because it is the cheapest?

There is a great deal of difference between well manufactured Yellow Pine lumber from high class forests, cut by responsible experienced producers, (who will continue in business many years) and the "other kind."

ASK YOUR DEALER

"Does the Yellow Pine Structural and Finish lumber going into my construction come from mills like these"

LOUISIANA LONG LEAF LUMBER CO.

Fisher, La. 2 Plants.

K. C. Southern R. R.

Victoria, La. 1 Plant.

T. & P. R. R.

FOREST LUMBER CO.
Oakdale, La. 1 Plant.
Mo. Pac. R. R. and Gulf Colorado &
Santa Fe R. R.

NOW BUILDING

WHITE-GRANDIN LUMBER CO.

Slagle, Louisiana

K. C. S. R. R.

LOUISIANA CENTRAL LUMBER CO.

Clarks, La. 2 Plants.

Mo. Pac. R. R. and T. & G. R. R.

Standard La. 1 Plant.

Mo. Pac. R. R.

LOUISIANA SAWMILL CO., INC.

Glenmora, La.

Mo. Pac. R. R. and Red River & Gulf
conn. with T. & P. R. I. and S. P.

Combined Capacity, 1,000,000 Feet Daily

Missouri Lumber & Land Exchange Co.

J. B. WHITE, Pres. and Genl. Mgr.

Long and Short Leaf Yellow Pine

QUALITY—SERVICE—CAPACITY

R. A. Long Building

KANSAS CITY, MO.





USE
Victory
Bread
SAVE
WHEAT

USE Victory Bread — save wheat. That's an important obligation with you now.

When you have it toasted—just right, and buttered hot, you'll find that this "substitute" bread has a lot more flavor.

Toasting brings out flavor—every time. It makes tobacco delicious. Try Lucky Strike Cigarette—it's toasted.

LUCKY STRIKE CIGARETTE

Save the tin-foil from Lucky Strike
Cigarettes and give it to the Red Cross

It's
toasted

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Guaranteed by
The American Tobacco Co.
INCORPORATED



BOGALUSA BOGALUSA BOGALUSA

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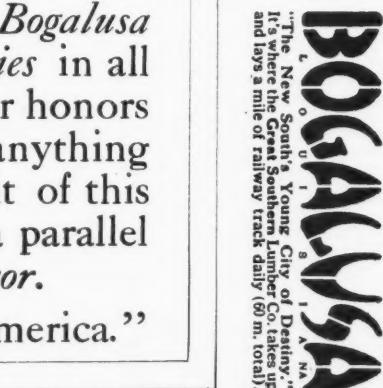
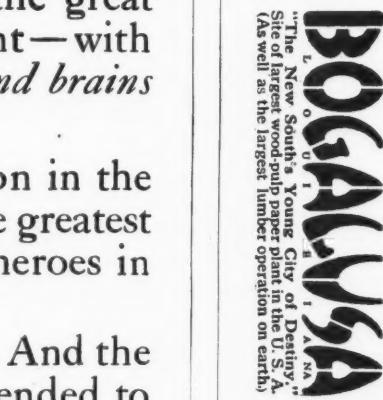
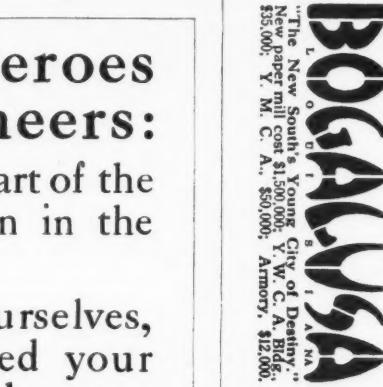
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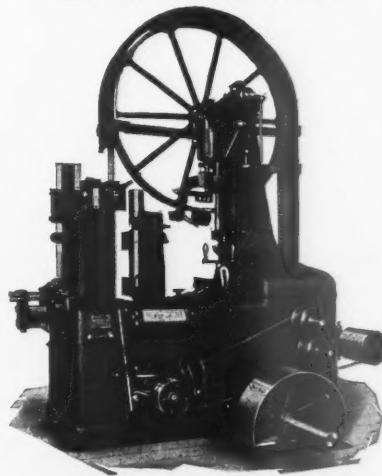
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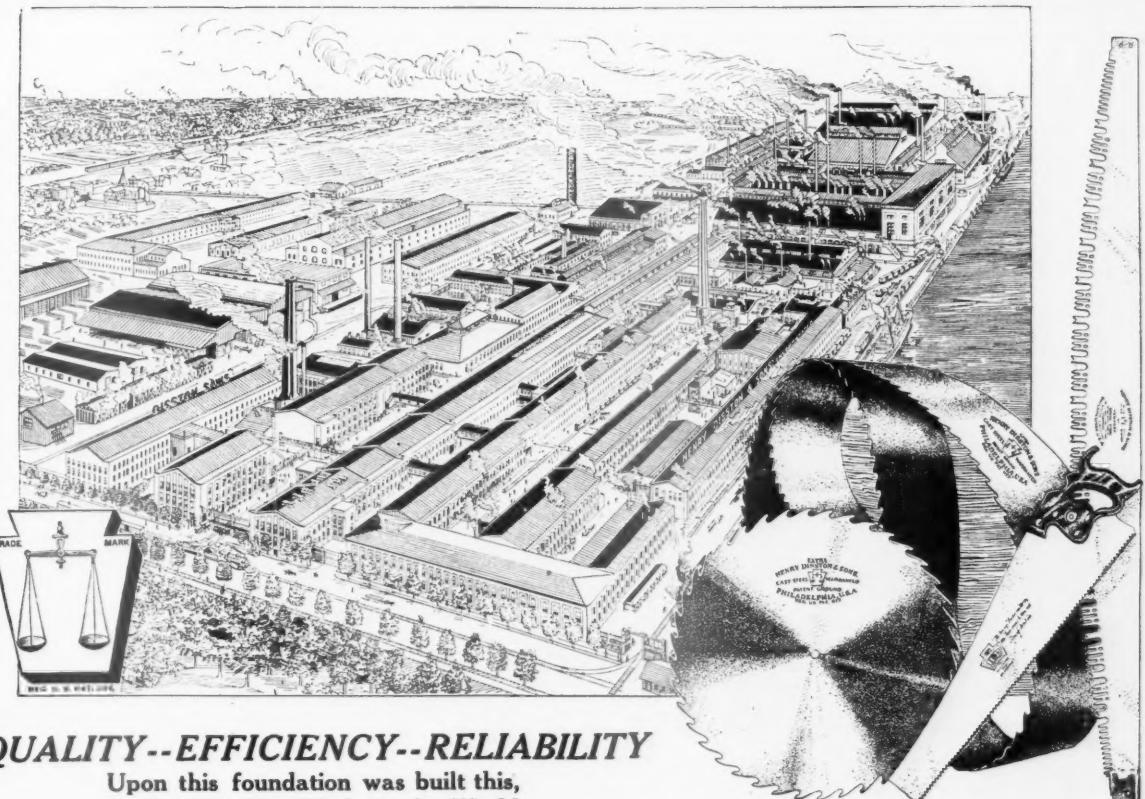
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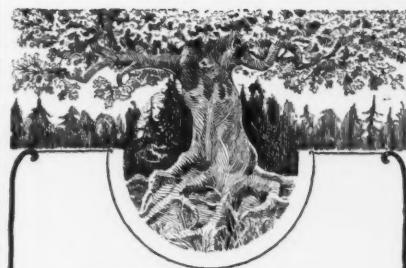
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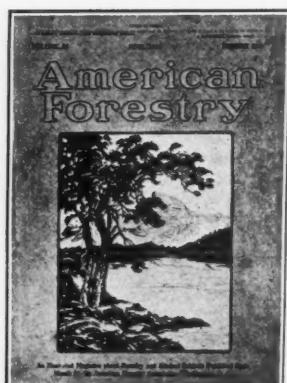
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